IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TENNESSEE
AT KNOXVILLE, TENNESSEE

MARILYN R. FOSTER, Plaintiff, vs. JONATHAN WILLIAM HAFNER, M.D. and EAST TENNESSEE EAR, NOSE & THROAT SPECIALTIES, P.C., Defendants.	Case No. 3:19-cv-24

EXCERPT OF TRIAL PROCEEDINGS
BEFORE THE HONORABLE CHARLES E. ATCHLEY, JR.

Tuesday, March 29, 2022
PM SESSION

APPEARANCES:

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EXHIBITS

FOR THE PLAINTIFF:

FOR THE DEFENDANT(S):

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THE COURTROOM DEPUTY: All rise.

This honorable court is now in session. Please come to order and be seated.

THE COURT: All right. Good afternoon.

MR. JONES: Good afternoon, Judge.

THE COURT: Are we ready, Mr. Jones?

MR. JONES: Plaintiff is ready.

THE COURT: All right. Let's go ahead and bring our jury in.

(Whereupon the following report of proceedings was had within the presence and hearing of the jury:)

THE COURT: Just have a seat.

All right. Welcome back. Everyone ready? Everybody is here. All right.

Mr. Jones, call your first witness, please.

MR. JONES: Dr. Hafner.

THE COURT: All right.

(The witness was thereupon duly sworn.)

THE COURTROOM DEPUTY: Thank you. You may be seated.

THE COURT: Whenever you're ready, Mr. Jones.

JONATHAN WILLIAM HAFNER, M.D.,

having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. JONES:

Q. Dr. Hafner, the jury has heard about some of your background and education. Tell the jury how long you have practiced medicine in Tennessee.

A. Well, I did my medical school at the University of Tennessee, but I started practicing in Tennessee as a physician, as an ear, nose and throat physician, in 2016.

Q. Okay. And how many partners do you have in that practice? I'm using "partners." How many associates do you have?

A. I have three other partners in my practice.

Q. In the course of your practice, what is most of your work? What do you do mostly?

A. I'm a general otolaryngologist. So that means we do some of everything. We do tubes and tonsils. We do head/neck cancer surgeries. We do ear surgeries, fixing holes in the eardrum. So we're called general otolaryngologists, and so we kind of do a little bit of everything.

Q. What's the majority of your practice?

A. Again, you know, tubes, tonsils, thyroid surgeries, head/neck cancers, some skin cancers, some ear surgeries. I don't have a particular focus in my practice.

Q. Would 50 percent or so of your practice be made up of tonsil issues, tubes in the ears and those things?

A. By number, tonsils and tubes end up being a large number of our procedures.

Q. All right, sir. How many Zenker's diverticulum surgeries have you done?

A. I had done three and four in practice when I was in Texas; approximately about eight of them in training.

Q. Okay. In training in your residency, did you do those all by yourself or did you have anybody else with you?

A. No, in training, you're there with faculty.

Q. Now, so would you do part of those surgeries, all of those surgeries, or I guess it depended on where you were in residency?

A. Correct.

Q. Have you done -- have you done any Zenker's diverticulum surgeries since Mrs. Foster's?

A. I have not.

Q. Have you done any research about this surgery

since you did Mrs. Foster's surgery?
A. Yes.
Q. Let's start then with the issue of size. Have you ever operated on a Zenker's of two centimeters or less endoscopically other than in this case?
A. I don't recall the specific sizes in training. I believe all the ones I did in Texas were larger than two centimeters.
Q. Do you have any impression that any -- that any Zenker's you ever took part in was under two centimeters?
A. I can't recall from residency.
Q. Does the size of a Zenker's change surgical techniques, surgical approach?
A. Sometimes it does.
Q. And there are vari- -- there are various ways to do Zenker's, aren't there?
A. Traditionally, Zenker's diverticulums are done with an open approach through the neck. Within the last 20 years, approximately, the majority of the approaches are what we call endoscopically, which means we're going through the mouth, going down to the area of that sac, and there is multiple techniques that people have described. The primary ones being using a laser to divide that septum between that sac, stapling, and then

the HARMONIC® scalpel are probably the three most common methods.

Q. Let's talk about laser for a minute just to get a little bit more background.

The CO_2 laser is done with a microscope, and you can actually see on a cell-by-cell basis what you are dividing; is that correct?

A. You can't see the cells. Cells are much smaller than you can see with a microscope. So I don't --

Q. So if there is testimony from people that do that in the record, that they can tell on a cellular basis that they're in muscle tissue, do you disagree with that?

A. Well, you can see muscle, but a cell is smaller than we can see with an operating microscope.

Q. Okay. Is it more precise than the surgery you do, as far as differentiating and disclosing exactly the kind of tissue that you're cutting?

A. I don't know that it is necessarily more precise.

Q. How would you -- how would you characterize it?

A. It's just a different technique to divide that tissue.

Q. And have you read the testimony of a doctor at

Vanderbilt, deposition testimony, who does this surgery microscopically, about -- about her ability when she does this surgery with the microscope to tell on a cellular level?

A. Yes, I've read Dr. Vinson's notes and Dr. Francis' notes saying they use the CO_2 laser to do this procedure.

Q. And do you recall seeing her testimony that she can use this precise method and precisely see and divide and know she is in the muscle tissue that way with her microscope?

A. Correct.

Q. Okay. Now, let's start a little backwards on this. I want to ask you some questions about the second surgery, the repair surgery, and try to get an understanding of what you're describing in the operative note.

A. Sure.

Q. You went back about midnight to do the surgery because your patient in the previous surgery had developed, at at least some point after this, signs and symptoms of a perforation; is that correct?

A. Correct.

Q. And you were told by a nurse that when she was brought to the room after your surgery the first day and

when -- after she got out of the postanesthesia care that she started having neck swelling at that time; is that correct?

A. That is incorrect. The first time I was notified that she had any swelling of the neck was the day following the surgery in the afternoon.

Q. All right. When did the nurse tell you she first had signs of neck swelling? I'm not saying when did the conversation you had with the nurse take place. When was the nurse saying there was swelling?

A. Well, the first time I had any information about neck swelling was the afternoon on the day after the surgery.

Q. Okay. Forgive me for being clumsy in my questions.

I'm not trying to -- I'm not asking you now when you were first told about it or told that there were signs, but did a nurse tell you that she had swelling in the neck when she came up, was brought to the room following surgery, and that it had gotten worse over time?

A. No, a nurse did not tell me that.

MR. JONES: 000134.

BY MR. JONES:

Q. Okay. Doctor, do you see that on your screen?

A. I do not have anything on the screen yet.

THE COURTROOM DEPUTY: It's on.

MR. JONES: I'll try to do it the old-fashioned way.

MR. CALLAHAN: Hold on, Jon.

THE COURTROOM DEPUTY: One second. There you go.

BY MR. JONES:

Q. Doctor, I'll give you a chance to look at that, but is that your note?

A. Yes, it has my signature at the bottom.

Q. Do you believe this note to be accurate?

A. I wrote the note, so, yes, it is accurate.

Q. I'm sorry?

A. Yes, I wrote the note. It's accurate.

Q. Okay. Now, this is called an ENT Progress Note. It's part of the Methodist Medical Center record. It said, "Called nurse this morning, this a.m." You're making this note on the afternoon of -- almost 6:53 p.m. on the 13th, which is the day after your first surgery; is that right?

A. Day after surgery, correct.

Q. "Called nurse this morning." And what's this symbol after that? You've got a triangle?

A. This a.m.

Q. And, "Patient suctioning and not swallowing." Was this the first time you had any contact about this patient since you had done your surgery?
A. In the morning, yes.
Q. Okay. And what time that morning was this?
A. I don't recall. Approximately probably 9:00 a.m.
Q. All right. And after this call, when did you next have any contact about this patient?
A. It was in the afternoon. It was -- you know, I think I have there in the note that I was called approximately 3:30 p.m.
Q. All right. And you called back at 3:30 p.m. about that today, and patient reported by nurse to have neck swelling since when?
A. Since coming to the floor last night.
Q. Okay.
A. But that's the first time I learned of that.
Q. I understand you first learned about it in the afternoon.
A. Right.
Q. My question is, though: We're talking about when this patient first had signs that she already was having a neck -- and had already been experiencing a neck perforation. Is swelling in the neck where you've

done your surgery concerning for a possible perforation on the part of the doctor that has done the surgery?

A. Yes, it is.

Q. So earlier, just a moment ago when I asked you if you had ever had any report that this patient when she came to the room was having neck swelling, was your memory wrong about that?

A. The day of surgery, I did not have any information. I learned about it the day after surgery, and that's documented in my note.

Q. Okay. And forgive me for being so clumsy in those four questions not to differentiate that now, but you've known all the time that she had signs of a neck perforation by the time she reached the floor, by the time she reached her room following your surgery; is that correct?

A. The information I'm trying to convey is that I learned about that the day after surgery, not the day of surgery.

Q. Okay.

A. But, yes, since that time, yes, I was aware a day after surgery that she had developed that the day before. I was just not notified of that until the day afterwards.

Q. So within an hour or so or at least a couple

hours from the time you did your probe in her -- in her throat to see if you could find if there was any hole at that time, within a few hours of that, she plainly had a hole where you had done this surgery, to the best of your knowledge; is that correct?

A. It's whenever the nurse would have reported that she had swelling in her neck.

Q. Well, the nurse is reporting that she had swelling in her neck when she arrived at the room, basically; isn't that correct?

A. Correct, but I don't know what time that was.

Q. Okay. So you had known that she had been experiencing swelling in the neck for 24 hours or so before you were seeing the patient at about 3:30 that afternoon; is that correct? Sometime after 3:30?

A. Again, the way you're saying that, I learned of that during the second call at 3:30. So I didn't know about air being in the neck.

Retrospectively, I can say that from what the nurse documented that there was air there, but I did not know about that until the following day.

Q. Okay. All right. And your plan in the second surgery -- you got some additional MRI studies and imaging studies after you wrote this note; is that correct?

A. There were CT scans or CAT scans, not an MRI, but --

Q. Okay. But your plan was to go in and drain the mediastinal fluid or infection out of the neck; is that correct? That's part of the plan?

A. That is part of the plan, correct.

Q. And the second part of the plan was to remove the diverticulum; is that correct?

A. That's correct.

Q. And you expected to complete the myotomy; is that correct?

A. That is correct.

Q. In other words, the CP muscle that you had not gotten a complete myotomy of in your first surgery, when you went back in and were going to do the second surgery, you were going to do a complete myotomy of that; is that correct?

A. That's correct.

Q. Did you expect to close the hole that you -- the imaging study and everything was showing you in the esophagus, did you expect to close that?

A. We expected to close a hole. The imaging study didn't necessarily show a hole. It just showed that there was fluid in the chest, which was likely coming from saliva that she was swallowing and it was going

through a suspected hole.

Q. Okay. Imaging was showing the results of the perforation, not the hole itself?

A. Correct.

Q. And then you expected to put drains in during the surgery; is that right?

A. Yes.

Q. You expected to wash out -- to suction out and wash out thoroughly all the infected tissue; is that correct?

A. That is correct.

Q. And then when you said you planned to close the hole, your plan on this repair -- on this surgery you were going to do that night, you were somehow going to put something over the hole that was in there as a part of this surgery?

A. Well, going into the surgery, you don't know the size of the hole, the exact location. So the exact plan of repair, you don't know for sure. So I wouldn't say I was going to put a -- something over the hole. We were going to evaluate that when we got in there. But the plan was, yes, if we saw a hole to close the hole.

Q. And your expectation when you made the -- this note and when you started the surgery was that you were going to close the hole; isn't that correct?

A. More likely than not, yes.

Q. Now, let me ask you how you went in, and if you could take us through kind of a step-by-step process of what you were doing and what your surgical note means and describes.

Do you have your operative report in front of you?

A. I do not right now.

MR. CALLAHAN: Excuse me, Todd.

MR. JONES: I'm sorry, Your Honor. I'd like to make this note an exhibit.

THE COURT: Okay. You propose this as Plaintiff's Exhibit No. 1; is that what it is?

MR. JONES: 1-3- --

MR. CALLAHAN: 1-134 is the progress note.

THE COURT: Any objection?

MR. GIDEON: No.

THE COURT: So moved. Publish to the jury.

(Plaintiff's Exhibit 1-134 was marked and received into evidence.)

MR. JONES: I'm sorry, Your Honor. It will take me a little while still to get used to -- I still think you have carbon paper.

THE COURT: Well, we might have it somewhere, but I'm not getting it for you.

MR. GIDEON: No objection to this either.

MR. JONES: We'd like to make this an exhibit.

THE COURT: So ordered without objection.

THE COURTROOM DEPUTY: Which number was this?

PLAINTIFF'S COUNSELS' ASSISTANT: 1-211.

(Plaintiff's Exhibit 1-211 was marked and received into evidence.)

BY MR. JONES:

Q. Have you had a chance to look at it and recognize it to be your note?

A. Yes.

Q. All right. Now, in describing the findings, what you found in the surgery, the first thing you say is friable pharyngeal mucosa. First of all, what's mucosa?

A. Mucosa is like the lining in your mouth. It's kind of the pinkish stuff inside your nose, inside your mouth.

Q. What's pharyngeal?

A. That's the back of the throat. So you have an upper pharyngeal area where your tonsils would be, a lower pharyngeal area, which is where the food goes before it goes into the esophagus.

Q. And the Zenker's diverticulum that you operated on the day before, that would have been classified as

pharyngeal tissue; is that correct?

A. That is correct. You'll occasionally see some people call it upper esophageal, but it's really pharyngeal tissue.

Q. All right. And what you're finding in your surgery was a small perforation at the inferior extent of the previous endoscopic diverticulum beyond the placement of the endoscopic staples.

First of all, what does the inferior extent mean?

A. Well, the inferior extent is the interior portion. So during the initial procedure, that septum consisting of mucosa and muscle was divided with the stapler, and that divided a certain portion of it. And then the last approximately five millimeters to a centimeter that was left over was divided with a HARMONIC® scalpel. So you're going to have two sides, almost like a V, to that division of that barrier between the muscle, the sac, and the esophagus. And so there will be two sides to it.

When you're -- with the second procedure, you're approaching it through the left side. So you're going to see the left side of those staples. And there was a small hole just at the inferior extent of that staple line.

Q. And "inferior to that staple line," is that where you used the HARMONIC® scalpel?
A. That is correct.
Q. Is that where this hole was?
A. It was at the inferior extent of this staple. It's not a very big segment. So it was between that staple line and the very tip of the end.
Q. Yeah. Half a centimeter, maybe not in surgery with your visualization, but half a centimeter is pretty small, isn't it?
A. It's fairly small.
Q. Okay. And one millimeter is very, very small. Forgive me for saying it that way. What's about the -- a little thicker than a fingernail?
A. Probably fair.
Q. So where you had applied the HARMONIC® scalpel in your surgery the day before, when you go in in your second surgery, at that place you find a hole, a perforation; is that correct?
A. That is correct.
Q. What do you think caused that hole?
A. It could be multiple causes. We know from just doing the surgeries that those holes can be caused by a stapling technique, a laser technique, HARMONIC® technique. So we know no matter what technique you can

have, you can get these microperforations, and almost every state you look at has a potential risk of what we call air leaks, which are actually small perforations. There is no way of knowing when you go in there what caused it. You know there is a hole, but there could be multiple factors in a surgery.

One, the tissue itself by nature is just very friable. That mucosa we talked about is so thin -- I mean, if you put your finger underneath it, you could see your glove. So it's very thin and friable by nature of itself. It has no support to it. So that's why it's outpouching through the weakness in that area. It has no support behind it. So it's just very thin and friable to begin with.

And so they can get torn just putting your instruments in in an initial procedure doing an endoscopic approach. They can be torn by, you know, stitching it if you're stitching it. And so it could have been caused by the stapler itself. It could have been caused by tension. It could have been caused by just the nature of the tissue not being real strong itself. You know, sometimes thermal damage can cause it. So there is multiple causes, but you don't know. All you can see is that there is a hole.

Q. Well, you can see a little more than that

because you could see where this hole was; is that correct?

A. Correct. It was at the inferior extent of the staple line.

Q. Well, it was -- this hole was not where the staples were; it was below that, and it was where you had applied not the staples but the HARMONIC® scalpel; is that correct?

A. That is correct. But there is always a union between those two areas.

Q. Well, are you saying that somehow the staples you put in were just as likely to be a cause of this as the HARMONIC® scalpel that you used right where the hole was?

A. Well, there is a border. There is always a joint between two devices. And so, yes, there is a staple joint and where the HARMONIC® is. And so there is always going to be a union there, and that's where the hole was.

Q. Well, this hole --

A. So I'm not saying it's a staple or the HARMONIC®. It could have been either one.

Q. Well, this hole was found by you at the very base of that septum you were trying to divide, and it was approximately five millimeters below where you had

used the stapler; is that correct?

A. That's not completely correct. You said at the very bottom of the septum. I said when we were coming from the side, you have an area that I used the HARMONIC® with, and you have, like, a V-like thing, and you're coming from the left side, so you're going to see the left side of that suture line. And so there is a distance there. So there is a certain amount, you know, approximately five millimeters to a centimeter there, and it was at the inferior extent of the staple line. The very tip of it would be down at the bottom of the V and it would be almost more on the side.

Again, like you said, it's a small area and you're operating, but -- but it wasn't at the very tip, what you're saying; it was at the inferior extent of that staple line on the left side that we were approaching on that you could see the hole.

Q. You took a picture in your first operation; is that correct?

A. I did; I took several pictures.

Q. And you took one picture where you had this discolored tissue at the very base of your surgery; is that correct?

A. That is correct.

Q. And that was down at the base of where you used

the HARMONIC® scalpel where you took that picture and where the tissue was discolored?

A. Yeah, it's at the very bottom part of the V.

Q. And do you think you might not have testified in this case that where this hole was found was right where all that brown discolored tissue was that you had photographed at the base of this septum in your previous surgery?

A. Well, if we can show the picture, I can describe it.

Q. First of all, do you acknowledge that where that brown discolored tissue is is right where the hole was found the next day?

A. I can't say that, no.

Q. Well, you're the only man that has seen it twice; is that correct? You saw the first surgery and you saw the second surgery.

A. Correct, but there was not a hole at the first surgery. So I palpated that area during the first surgery. So we knew there was not a hole where I palpated it. So the only time we saw the hole was on the second surgery, and that's where I described it there is at the inferior extent of that suture line.

So there is -- at the very tip of where it gets divided is where the brown area is, which is likely

muscle fibers, which is what you'll see at the very bottom because you're -- you're not doing what we call a complete myotomy. And so the bottom part of that V is still going to be some of that muscle that's too tight that's constricting.

The side of it has some coagulation. That's what that HARMONIC® scalpel that we showed earlier is doing. It's sealing and separating the tissue, and so you're going to have -- on the picture that will show -- at some point you'll see what looks like a brown spot, as I think Mr. Jones is describing, at the bottom which is part of the muscle, and you see coagulated tissue on the side.

Q. Sir, when you found the hole, that hole was at the very bottom of your cut, your surgery, the previous day. It's the bottom of that septum. The hole exists -- you found the hole at the time of the second surgery. You actually looked at it; is that correct?

A. I looked at it, yes.

Q. And it was at the bottom of that septum; is that correct?

A. Again, if you -- with respect to where the staples are, it's towards the bottom.

Q. Okay.

A. If you're trying to get the fine, minute

details of where it was, it was more along the side at the bottom.

We're talking about millimeters in distance you're trying to describe. I'm more than happy to show it on a picture so we can see. Sometimes a picture is worth a thousand words.

Q. We'll come to the picture. I'm just trying to find out what your real thought is about what caused this hole.

When I asked you a minute ago, you talked about stitches might have caused it. Were there any stitches in this first surgery?

A. I was speaking more in general of the techniques that we used to close these. There are many techniques, and what I'm saying is: In all those different techniques, you'll get air leaks; you'll get holes, and so any of those things could potentially cause it. I wasn't referring to this particular case.

Q. I'm sorry. I was trying to ask you about this surgery.

In this surgery, stitches had nothing -- the first surgery had nothing to do with this; correct?

A. The first surgery had nothing to do with this case.

Q. And the two staple lines are in both -- on

both -- are off to the edges of what you're dividing when you're using the stapler; is that correct?

A. Once you've stapled it, yes, they divide off to the side.

Q. Number three is a small perforation at the inferior extent of the previous endoscopic diverticulum beyond the placement of the endoscopic statements. Those are the words that you chose.

A. Correct.

Q. The interior extent, that means the very bottom; is that correct? That's what the words mean; isn't that correct?

A. Well, inferior is below the staples.

Q. I'm sorry. The inferior extent is at the bottom below the hole staples; at the end of the septum is where you're describing?

A. So where I used the HARMONIC® scalpel was inferior to where the staples were.

Q. Do you think the Harmonic® scalpels caused this hole?

A. It is possible that the tissue did not seal after the Harmonic®. That is a possible cause.

Q. Do you know of any other possible causes? Not just theoretically how you get a perforation in surgery, but how this perforation, how you got this one, other

than the HARMONIC® scalpels?

A. Yes. Like we talked about the tissue being friable. So even when you seal it with any technique, the tissue doesn't just stay sealed.

Q. Okay. Well, in the first surgery, you described this tissue. Did you use the word "friable tissue" when you did the first surgery?

A. I don't believe I described it in my note, but by nature, it's friable.

Q. Well, in your -- at the time of your first surgery, did you look at the tissue where you were using the HARMONIC® scalpels and say before you turned the power on, "Boy, this is friable tissue I'm about to energize"?

A. I did not. But as an ENT otolaryngologist, you know it's friable when you're doing the procedure. When you're placing that diverticular scope, as you saw in the pictures, it has two bevels, and you're placing it in position. You've got to be very careful that your scope itself doesn't tear that sac or diverticulum because it's friable. So we know it's friable even before we do the surgery.

Q. Okay. So that's what your thought process was at the time of the first surgery?

A. Correct. It should be -- it should be every

ENT'S thought process because part of that doing the surgery is knowing that sac is just friable tissue. It's very thin. It's very easily torn during a procedure.

Q. Okay. So you said that should be every surgeries -- surgeon's thought process; is that correct?

A. Correct.

Q. And in the standard of care, every reasonable surgeon that does this is expected to know that this tissue where you were using the HARMONIC® scalpels is very thin and very likely to be exposed to a perforation if I don't use the highest care; is that fair?

A. If you don't use what?

Q. If I don't use the highest care, my best judgment, if I'm not paying attention, at the top of my game, this tissue is really vulnerable and I have a good chance of perforating it; is that fair?

A. Yes, it has to be in the back of your mind, that's correct.

Q. And that's the standard of care for you when you did this first surgery; is that correct?

A. Yes, that was in my mind during the surgery.

Q. Okay. Now, would part of using the highest level of care mean that I've got to know what my instruments are and how they're controlled and how to

operate them and what the possible effect of those instruments are on the adjacent tissue a millimeter or so away? The surgeon doing the surgery you did the first day by the standard of care had to have that thought and that knowledge and had to proceed like that; is that correct?

A. That is fair.

Q. And you knew that if you didn't proceed like that in your first surgery, with that knowledge and that ability to use the instruments you were using and your knowledge -- and that knowledge about how they would affect tissue, if you didn't have that knowledge or you didn't use it at the time of the first surgery, that would be a violation of the standard of care for you?

A. That is fair.

Q. Okay. When you did this first surgery, what power level were you using on the HARMONIC® scalpel?

A. It was a power of three.

Q. Did you remember that?

A. I did not recall at the time of deposition.

Q. Well, do you remember it now?

A. I do.

Q. So when did that memory come back to you that you didn't have when I took your deposition?

A. The day of the deposition.

Q. Do you remember me asking you in your deposition, Doctor, do you have any memory of that surgery, the endoscopic Zenker's surgery, other than what's in your operative note, and you saying, No, that's all I remember.

A. Correct.

Q. And then you're telling us even though that had been, I guess, almost several years at that point from the time of the surgery, that afternoon after the court reporter leaves, after I leave, Oh, I remember now it was three. I remember using the three. Is that what you're saying?

A. I discussed it with Dr. Bunge after our deposition and he reminded me of the settings of the Harmonic®.

Q. Okay, sir. You discussed with Dr. Bunge what the settings were when we took a recess in the deposition, and he says, The settings are three and five. He told you the settings were three and five during a break in the deposition, didn't he?

A. That's correct.

Q. And then do you remember me asking you, Doctor, do you have any memory of that now that he's told you, and you saying, I still don't know what the settings were that I used?

A. I don't -- I don't remember the order you asked me the questions.

Q. It will take me a while to pick that out, but we'll come back to this.

After your deposition, and you have 30 days to do an errata sheet and clean up and correct what you have said incorrectly, did you make an errata sheet change that says, I do remember what the setting was that I used and it was a three?

A. I don't recall making any changes in the deposition.

Q. Well, sir, you understood the depositions were under oath and were for a serious purpose for this lawsuit?

A. I understand that.

Q. And one of the purposes in this deposition was to find out what your memory was, what you knew and your thought process; you understood that?

A. I understood that.

Q. And by that afternoon -- was it before -- was it before the deposition closed or was it -- or did you remember this during the deposition?

A. You asked me a question during the deposition. I just did not remember the settings at the time. During a break, I just didn't remember the settings at

the time. I asked Dr. Bunge. He reminded me of the settings.

Q. Okay. What Dr. Bunge told you was that this machine you were using has two power settings that basically are used most of the time. One is a five. That can never be changed. And one is a three, and it can be changed, but it's not usually changed. Isn't that what you learned?

A. Oh, I remembered that. We know there is two settings on it. There is a minimum and a maximum setting. Those are default settings, and when you plug in the instrument, they're defaulted to a three and a five.

Q. Well, if you didn't even know what the settings were, how did you all of a sudden after the deposition remember, Oh, I was using a three? How did you get that memory?

A. Because that's the minimum setting on -- there is a button on the handpiece. We can show it again, but there is a minimum and maximum setting on the handpiece that correlates to those numbers.

Q. Okay. And how did you remember which one you used?

A. Because I always use the minimum. The maximum kind of goes through the tissue at a faster pace. And

you can hear it. There is a sound that gives off when you're going through the tissue, that the machine gives off. And I always use minimum.

About the only time I'll use maximum is when you can see right through the tissue on a head/neck cancer case. So it's an instrument that I use frequently. I use it for all my thyroid surgeries, parathyroid surgeries, head and neck cancer surgeries. So it's an instrument that I'm using frequently.

The technicians in the operating room are the ones that plug it in. They set it. It has default settings. I've never changed those default settings.

And so did I forget the settings at the time? Yes, but it was -- it was the same settings I always use. And rarely do you ever even change the settings. I don't know of anyone that changes them past the default settings.

Q. Well, do you always use three in every surgery you do?

A. Three or five. Remember, there are two settings. There is a minimum and a maximum.

Q. Okay.

A. So, as I said, there are times I do use the maximum setting in certain surgeries. But the minimum setting will take a slower time dividing the tissue.

Q. You use three sometimes in some surgeries and five sometimes in some surgeries, but you say, I specifically remember using the smaller setting, the minimum setting, when I did this surgery?
A. Yes.
Q. Why? Why would you use the minimum setting?
A. I just said it divides the tissue more slowly. It seals the tissue better. So the maximum setting won't seal the tissue as well.
Q. Okay. So if -- for this surgery, to do it safely under the standard of care, you should do this surgery at a setting of three, the minimum setting; is that correct?
A. That's the setting I choose.
Q. And do you choose that because it's safe for the patient?
A. I think it is.
Q. And do you think most surgeons doing this surgery with HARMONIC® scalpels, and you were trained at Mayo, would recognize that three was safer for the patient than five?
A. I think most would, but I can't speak for other physicians.
Q. But you have always known that since Mayo; is that correct?

A. Oh, I've known that probably since before Mayo. We used the HARMONIC® scalpel when I was at MD Anderson.

Q. Do you recall in your deposition testifying you didn't think it would make any difference for this surgery what setting was used?

A. I don't recall that.

Q. If you said that, would that be a mistake?

A. Well, I'd like to see the statement so I can see the whole statement. But, like I said, if another surgeon decides to put it on five, it still seals. That's what that Harmonic® does. It seals and divides the tissue, but it does it at a faster rate.

Q. Well, in your hands with your skills and your knowledge and the way you use this instrument, for you to do it, to give the maximum patient safety and be consistent with the standard of care, in your hands, it's needed to be done at a three; is that fair?

A. I believe it should be done at a three. But I can't say that's the standard of care.

Q. Well, if in your hands it's safer to do it at a three for your patients, aren't you required to do what's reasonable and to do what is best in your hands and use a three?

A. In my hands. But I can't say that that's going to be the same in someone else's hands.

Q. Somebody else might have different skills and be able to use a five?
A. Correct.
Q. But in your hands with your skills and the way you're trained, you need to use a three for this surgery for patient safety, and that basically is what you're required to do to give reasonable care for your patient; is that correct?
A. That's correct.
To give a good example of a corollary, the laser, which some people use, some people use a laser on a power watt setting of five. Some people use it on a power watt setting of seven. If a surgeon decides to use that as a seven, I can't argue with him that he should have used five. So everyone has different techniques in their own hands.
Q. Okay. But the standard of care is for each of those surgeons to use what is the safest in his hands or in her hands?
A. That is correct.
Q. Okay.
MR. JONES: Judge, I'm out of order, and it will just take me one moment.
THE COURT: That's all right.

BY MR. JONES:

Q. Doctor, I want to show you on page 74 of your deposition --

MR. JONES: If we can take down the previous exhibit. I'll come back to that.

BY MR. JONES:

Q. As you'll see from the previous page on 73, you just said that Dr. Bunge told you about the three and the five settings and that that's what they were.

And what did you say to Dr. Bunge and what did he say to you? I said I couldn't recall the settings. And he said there are only two settings, three and five. And there are standard settings. I said, Is three a higher energy? He said, Five would be a higher energy. That's what you said. And that's the first time I've used three and five when I questioned you. Other than my questions, had you ever heard of that before? Yes, I didn't recall what my settings were because usually I have the standard setting which we discussed before with thyroids. And I asked you what's your standard settings for thyroids, and he says, I don't recall.

And then coming back, so after that discussion, Is there any way you know of to find out how it was set in this surgery?

What was your answer under oath in that

deposition, Doctor?

A. My answer would be when they plug in the machine, it is set to the default settings. I didn't ask for anyone to change it. So it would have been the default settings.

Q. What answer did you give under oath when I asked you that question?

A. I said, "I don't know."

Q. Was that the truth?

A. I don't know throughout the surgeries at the time because I had already said before I didn't remember the settings of three and five.

Q. Well, after you found that out, and that's why I started the page above, you said you had that conversation during the deposition break with Dr. Bunge, and he told you it was three and five, and I come back -- we talked about you don't recall the settings in other surgeries. I said, Is there any way you know of to find out how it was set where? What are my words? In this surgery?

A. And I said, "I don't know."

Q. Okay. Is that the truth?

A. Well, I can't go back in time and look at the monitor, but I know when they plug it in, they set it to the default settings. So unless a surgical tech decided

to change the default settings, which would be out of the standard in an operation, it would normally be at three and five. And I don't know of any technician that would just go and change -- change it from the default settings.

Q. Did you go back through and try to look at the operative record?

A. We don't -- those aren't recorded. I don't know of any record where you actually record the default settings of a Harmonic® because I don't know of anyone that uses other settings other than three and five.

Q. Well, how soon after this deposition -- how long did it take you to realize, I was using the minimum power, the three?

A. Repeat the question. I'm not sure what you're --

Q. Sure. You said you didn't know during the deposition that you were using it at minimum power, but you realized that afternoon it was -- you were using minimum power. How long after the deposition was that before you had that realization?

A. So what I didn't know was the power settings, the three and the five. I did not recall those numbers on the machine. I didn't say I didn't remember whether I pressed minimum or maximum on the handpiece. That's a

different question. So I did not remember the power settings. They're default settings.

Q. I asked you repeatedly about how the machine was operated and how you set it. Did you ever say, I used the lower power setting in your deposition?

A. I don't recall if I did or did not. The line of questioning was regarding knowing the power settings and remembering the power settings, which I did not remember at the time of the deposition.

Q. All right. We'll come back to this area in a little bit, but let's go back to the exhibit that's up there. It says "friable pharyngeal mucosa" under Findings. Do you see that?

A. Yes, I think we've gone over this.

Q. And you've told us you found, quote, "friable pharyngeal tissue" in the first surgery, but you didn't put that in your note?

A. I did not put that in my note.

Q. Was this tissue different than it was the day before?

A. Well, we had operated on that tissue. So the effects of the Harmonic® and the stapler, whatever effects those had on the tissue.

Q. Well, other than that, when you were doing the second surgery and you got to this area of the Zenker's

diverticulum, was this tissue worse, more friable, more infected, more breaking down than it was at the time of the first surgery?

A. It's not a comparative question because when you're doing the first surgery, the point of that first surgery is to divide that septum. I described in the first surgery that I gently palpated the sac and the area with what's called an anesthesia Bougie. It's just a long, kind of malleable, soft rubber tubing.

In the second surgery, you're actually holding the tissue. You're suturing the tissue. So it's a different texture, a feel. And so it's not a comparative question to say is it more or less friable because you have different contact with the tissue than you do with the first surgery.

Q. Okay. Did you think this friable -- the tissue was friable the second -- in the second surgery because it was infected?

A. It was not infected. The infection was farther inferior in the mediastinum, and that's described in the operative report. We found the diverticulum and we went -- we were lifting up the esophagus inferiorly, and that's where we found the infection was in the mediastinum.

Q. Okay. So you didn't see anything on the

diverticulum side that indicated infection to you at the time of the second surgery; is that right?

A. No.

Q. Was it inflamed?

A. To some degree, yes, because the tissue had been treated with a Harmonic®. So you're going to get some inflammation from using that HARMONIC® scalpel. When it seals and coagulates it, you're doing some damage. That's what the sealing of that Harmonic® does. You're coagulating the tissue. So there is going to be some inflammation there. And that's reflected in, I think, the pathology report later.

Q. Well, Doctor, other than where you're pushing those tongs down and you've got tissue in-between, that's where when you use a HARMONIC® scalpel, you're changing the tissue; is that correct?

A. I didn't hear all of the question.

Q. You see these tiny -- do you see these tiny little --

A. Yeah, I'm familiar with the instrument.

Q. Okay. When you seal it --

THE COURT: Mr. Jones, could you move closer to the microphone. I'm having difficulty hearing you and I think they might, also.

MR. JONES: Okay. I apologize. Thank you.

BY MR. JONES:

Q. You've got about a millimeter-wide top and bottom, and you clamp tissue between it, and then you hit the fire button, the on, to make it operate?

A. Correct.

Q. What you're doing is trying with these HARMONIC® scalpels to change the tissue that's between these two little, tiny tips; isn't that correct?

A. That's correct.

Q. And these two little, tiny tips are maybe a millimeter in width?

A. I'd have to measure them. It's close to that. A little bit bigger maybe, but --

Q. And the Zenker's diverticulum pocket is -- what? -- two centimeters in width?

A. In width?

Q. Yeah.

A. I didn't measure the width. So I -- you could approximate from the picture, but -- I'd have to look at the picture, but it's, actually, you know, from the picture because you're only getting a certain view of it with your scope, and so all you can see is from with your scope. But, you know, probably a centimeter-and-a-half wide.

Q. And so when you clamp this in a particular

place, how far away from this -- to make the rest of the diverticulum pocket friable, how far does it become friable from where this is actually clamped?

A. Well, the studies show it -- the thermal damage laterally is about 1.69 millimeters.

Q. Okay. Did you know that when I took your deposition?

A. I did not know that at the time.

Q. When did you get that knowledge?

A. During a review of the literature for this case.

Q. When you're using this operation in a patient who has trusted their body to you, don't you as a good surgeon need to be aware that you're going to get damage on each side, potentially, of about another 1.67 millimeters?

A. Well, again, we use that instrument in multiple surgeries, surgeries that have, really, more fine, delicate nerves; mainly thyroid surgeries. And so we use that instrument all the time.

So this -- in terms of this surgery, that lateral thermal damage, there is no extremely-important structures that are going to be -- have thermal damage, not nearly comparative to a thyroid surgery.

Q. Well, you're saying in thyroid surgeries, there

is more important tissue within that 1.67 on each side than there is when you're doing this Zenker's; is that correct?

A. Correct.

Q. You're not saying that you won't damage that 1.67 on either side.

A. Yeah, there is always that possibility when the instrument can -- any instrument is going to have some lateral thermal damage. Even a stapler has traumatic damage when you staple it.

And so there is always going to be some degree of lateral damage to the tissue when you're cutting it, whether it be a simple -- what we call a cautery where you almost get like a heated pencil device, which I think you referred to before, which they used early on back, I believe, in the '60s, and it had lots of issues with that, and that's why the technique was abandoned back into the late -- you know, early '90s when the stapler came in. And then the laser was introduced in the '80s. And the HARMONIC® scalpel was introduced, you know, more in the late 2000s. And so every instrument is going to have some type of lateral damage.

The Harmonic®, the whole point of using a Harmonic®, it is thought to have less traumatic damage than a lot of those other techniques.

Q. All right. However important you thought that tissue was, it was important enough -- because it's so thin or friable, or whatever it was to start with, in your testimony, it's important enough to know that if I'm within 1.67 millimeters of going through that tissue, I can create a perforation; is that correct?

A. Well, I didn't say that's -- lateral thermal damage in going through a perforation is different. Lateral thermal damage is the heat damage created laterally. That doesn't mean it's going to cause a perforation. I mean, the whole point of a Harmonic® is to -- with that energy from the vibration -- it's an ultrasonic machine. So it's going to vibrate at a high frequency. And it seals and coagulates. So coagulation, by nature, is going to be some type of a thermal damage.

You fry an egg too long and you're going to coagulate that egg yolk on your pan. That's thermal damage.

Q. Well, if you were in -- within 1.67 millimeters of either side where you were firing up and hitting that button, if you were within 1.67 of the mucosa in the opening into the retroperitoneal space, you could destroy and damage it enough so it would die, even if it died an hour after your surgery. You could kill that

tissue and cause a perforation, and that's something you recognized when you did this surgery; is that right?

A. It is possible, but that's the whole point of using a HARMONIC® scalpel is it causes less damage than the other instruments that we have.

Q. Okay. You've told us that's why the HARMONIC® was a good choice. My question is: You had to realize when you were using the HARMONIC® that if you applied them and you were within 1.67 millimeters of tissue that would end up causing this hole, you were making a mistake and you were outside the standard of care; is that correct?

A. I guess I'm not making clear your -- by nature of what you're doing with the surgery, you're sealing the tissue.

Q. Well, at the time you were using the HARMONIC®, did you divide the tissue within 1.6 millimeters of the end of the septum? Did you think you were that close?

A. You're close.

Q. Were you that close?

A. It's a fair approximation.

Q. Okay. So it's a fair --

A. The point of the surgery is to divide all the septum that you can.

Q. All right. And what's below the septum?

A. In this circumstance, in my surgery, it's the muscle. It's that cricopharyngeal muscle, or as you referred to it, the CP muscle.

Q. The muscle is on one side of where you were dividing, but if you divided that whole septum, that muscle is there, and right outside, right next to that muscle, 1.6 millimeters away, would be an open space; is that correct?

A. Not necessarily. If you think about that septum, and it's a -- almost a concentric muscle. It's attaching to a -- it's like, kind of, a ringed cartilage, and it's concentrically coming around and you're dividing this muscle, lateral to that muscle is still more muscle. There is a pocket of this mucosa that's kind of adjacent to the muscle, and so that's what it's doing is: It's kind of sealing the muscle and mucosa together and dividing it. So lateral, you would actually have more muscle.

And it all depends on the -- you know, how big of a pocket you have. If you have a much bigger pocket, that's going to change that answer.

But on Ms. Foster's case, it was only a two-centimeter pocket. That cricopharyngeal muscle is, on average, about four to five centimeters in length. So when we're dividing it, you still have more muscle

deep to you. And you're dividing the muscle, so there is still kind of muscle on the side of you as well with the mucosa of the pocket and with the mucosa of the esophagus.

Q. Did that muscle come within 1.6 centimeters -- or millimeters of the open space?

A. I'm not sure what you mean by an open space because deep -- deep to all of this there is tissue. There is -- you know, even behind the Zenker's diverticulum, it's a thinned out one. It has some fat. It has some tissue.

So there are theoretical spaces in the neck that are normally closed. They can become what we call potential spaces, which is what happened with Ms. Foster when there was a leak, and most likely slide was going through that leak or what we call a microperforation. It created an actual space where that saliva tracked down into the mediastinum and caused a mediastinitis.

And so when you mean "open space," there weren't any, really, open spaces; there are potential spaces that can be caused -- created.

Q. In simple terms -- there may not be simple, but as simple as I can get it -- you realized that in this surgery you were within 1.6 millimeters at times when

you were using the HARMONIC® of an area that if you damaged tissue, you could have a perforation?

A. Yes, I understand that.

Q. Okay. And that's the truth, isn't it?

A. That's the what?

Q. And that is the truth?

A. Yes.

Q. When you saw this hole, did you think it could have been caused by thermal damage from your HARMONIC® scalpel?

A. Yes, that is one thought.

Q. And what other thought did you have; what other possibility did you come up with?

A. Well, another possibility is that the tissue itself just breaks down.

Q. Okay. And what would cause it just to break down?

A. Well, again, by nature, it's friable tissue. So it may not seal. You know, just the normal act of swallowing, doing the things we do, and if it doesn't seal well, it just opens back up. If a tissue is friable by nature, it can open back up.

Q. So this tissue for 70 some years had been in her throat and it had been like that, and it just happened right after your surgery to decide that I've

had as much as I can take, I'm too friable, I'm going to break apart; is that sort of what you're thinking?

A. No, that's exactly not what I'm thinking. That's not what I said. There is certainly a possibility that, you know, things we did during the surgery, because we know that, you know, doing the surgery alone has a risk of that microleak that could have caused it. I just can't say exactly what the cause of it was. And that's what I was trying to convey earlier. Despite the different techniques that we use to do this, all the techniques all have that possibility to have a microleak, a perforation.

So there are techniques that commonly are used, stapling alone, CO_2 laser, that have that chance of a microleak, and they all have a chance of perforation.

Q. All right. Let me take a little different term in light of that testimony.

You realized when you did this surgery there was a chance that the way you were going to use the instrument, you would cause a microperforation?

A. Yes.

Q. And a microperforation is where you don't damage the tissue enough so it just completely opens, but it's so weak that it can't hold any more and it starts leaking, that process of leaking; is that

correct?

A. Correct.

Q. And what is being leaked in this area is saliva, generally; is that correct?

A. Initially it was probably air and eventually probably saliva.

Q. Okay. And as that saliva gets into the tissue in this micro process, if that -- if that saliva is infected, it's going to make this breakdown process worse and quicker; is that fair?

A. Well, the saliva is not infected. The saliva goes through this hole and it keeps collecting and keeps tracking down into one of those potential spaces I talked about. And then once it starts collecting, and in her case, in the mediastinum, when it sits there, any typical fluid that's not in a space where it's supposed to be has a risk of getting infected. It would be like an ear infection. You have adults that have fluid behind your eardrum all the time. Little kids get fluid behind your eardrum, they get infected.

And so when that saliva kept tracking down into the mediastinum and sat there, then the bacteria starts growing and it causes the infection.

But the saliva going through the hole is not necessarily infected. The tissue around it is not

necessarily infected. It's what happens as a result of that saliva going down into the chest and sitting there.

Q. Well, is the microperforation a gradual process?

A. I don't think we know exactly what causes -- if it's gradual, instantaneous. I mean, they're usually detected after surgery when someone has air in the neck like Mrs. Foster did.

Q. Sir, this was a clean-contaminated surgery; is that correct?

A. This is considered a clean-contaminated surgery.

Q. And that's for classification of when you're supposed to give prophylactic antibiotics; is that correct?

A. That is not correct.

Q. Isn't that why we have the classification of clean-contaminated?

A. Well, initially the whole reason we started with these recommendations is it would cut down in surgical site infections. So they made these very broad recommendations of giving prophylactic antibiotics.

Well, over time, people have looked at whether that actually helps or not. And so, you know, we presented an article. It was actually in the ENT

literature looking at the use of prophylactic antibiotics in head and neck procedures. That article found that certain clean-contaminated procedures, such as tonsillectomies, septoplasties, rhinoplasties, they're all clean-contaminated procedures, and there was a strong recommendation against using antibiotics.

In all those surgeries, there is actually an opening of mucosa of the tonsil of the septum. In our actual case in this clean-contaminated surgery, you actually have sealing of the tissue.

So comparatively to those different types of clean-contaminated surgeries in ENT that they found no recommendation for antibiotic usage, this was -- theoretically has a lot less risk of having need for a prophylactic antibiotic than those surgeries.

Now, the second case, that same article found that head and neck surgeries -- and what I mean by that is surgery where you go through the head and neck, cancer cases, which would be more likened to the second surgery we did, there is a recommendation for using perioperative antibiotics, and for the second surgery, she had antibiotics.

Q. Okay. Your association of head and neck surgeons has a recommendation that in head and neck surgery involving pharyngeal tissue that's

clean-contaminated that you give prophylactic antibiotics; is that correct?

A. I just quoted a study that said the pharyngeal tissue, which is the back of the throat where the tonsils are, does not recommend prophylactic antibiotics. In fact, it is now contraindicated to give antibiotics for a tonsillectomy.

Q. Okay.

A. And that is in the pharyngeal tissue.

Q. I will come to that and deal with it, but your association has guidelines -- and we'll deal with the tonsils -- that say for head and neck clean-contaminated pharyngeal surgeries, you're supposed to administer prophylactic antibiotics; isn't that correct?

A. I can't agree with that.

Q. Are you familiar with a handbook for antibiotics of your association for head and neck surgery?

A. Well, again, define head and neck surgery. We're talking about specific procedures versus the handbook. And, like I said before, those recommendations have changed over time. We have to use the best available information to update those recommendations over time.

And so initially the goal of these treating

surgical site infections, which this was not a surgical site infection; the infection was in the mediastinum, not at the surgical site, but those recommendations were sweeping recommendations that were made to try to prevent surgical site infections. And so that's why you look at the literature. That's why people study that to see if there is benefit.

Q. Okay. I want to deal first with the sweeping and then we'll clean up with the dust pan in the corners. But the sweeping recommendation of your association is that if it's a clean-contaminated head and neck surgery case involving pharyngeal tissues, you're supposed to administer prophylactic antibiotics; is that correct? That's the sweeping --

A. I just gave you an example, but I do not feel that's correct.

Q. That's the sweeping recommendation; is that correct?

A. No, that's not correct.

Q. Well, you say that we've made a change in regard to tonsils. A change from what?

A. Previously people would give prophylactic antibiotics.

Q. Not only would they give it, but the association was recommending it; isn't that correct?

A. They did.
Q. Okay. And then they did studies with the tonsils themselves, and they -- based on those studies, they have changed the recommendation for tonsil surgery; isn't that correct?
A. That is correct.
Q. Have they ever changed it? Has your association ever changed the recommendation for endoscopic Zenker's diverticulum surgeries?
A. There never was any specific recommendations for Zenker's diverticulum.
Q. Only the general recommendation pharyngeal clean-contaminated usage; isn't that correct?
A. Well, again, you have to use your best available knowledge to say, head and neck surgery, what type of surgeries are you talking about and is there benefit?

So, I mean, we can't do a study for every single procedure and have specific recommendations. We know these cases, there is about two out of 100,000 -- per population, on average, two patients out of 100,000 in a year will have these. So they're fairly rare.

And so there are certain conditions that you're just not going to have real good studies on. And we'll

talk about more studies throughout this case, but, you know, generally, the numbers in these studies are not high-number studies.

And so you have to extrapolate that information and use it to the best of your availability because there is not always specific information you can extrapolate to that case. That's why I was referencing that study that looks at the best recommendations for antibiotic usage.

So you can cause more harm by giving prophylactic antibiotics than you can do good, and you always have to balance that advantage versus disadvantage.

Q. And in your view, you need to be careful and not give antibiotics unless you know you have a real need for them and that the benefits of giving the antibiotics clearly outweigh any downside; is that correct?

A. That should be true for any procedure --

Q. Okay.

A. -- in medicine.

Q. That's the standard of care for you in your practice; is that correct?

A. That's a standard for medicine is first do no harm.

Q. Okay. Did you prescribe antibiotics to Mrs. Foster?
A. I did. Prior to surgery, I gave her an antibiotic for a suspected sinus infection.
Q. Why? Why?
A. Because I suspected a sinus infection.
Q. Did you examine her?
A. No, I did not. She was -- well, I got a phone call approximately a week before surgery. We have multiple locations in our office, and I was in Kentucky at the time, and I got a message that she had symptoms of a sinus infection. And so we treated that sinus infection with amoxicillin. We treated her with a seven-day course of amoxicillin twice a day for what was a suspected sinus infection based upon the symptoms that she was calling about.
Q. Okay. And you thought, I don't need to see her and examine her; I don't need to get blood tests or cultures; it's -- it's safe enough to give antibiotics just on the suspicion of it without any confirming laboratories; is that correct?
A. Well, one, like I said, I was in Kentucky --
Q. Is that correct?
A. Oh, we don't normally get laboratory values for a simple sinus infection.

Q. But do you normally see the patient before you do it?
A. We try to, but that is not a practical -- not always practical. Again, I was two-and-a-half hours away. So you have to use the best available information to treat your patient.
Q. And was it your judgment, I'm not going to use prophylactic antibiotics for this surgery because this patient's already on antibiotics?
A. I do not typically give prophylactic antibiotics for this surgery.
Q. Okay.
A. So if she had not called with symptoms of a sinus infection, I would not have prophylactically given her an antibiotic prior to surgery. That is not my routine for this particular surgery.
Q. Okay. Do you know of any academic institutions where the residents are taught don't use prophylactic antibiotics for this surgery?
A. For this particular surgery?
Q. Yes, sir.
A. Well, Mayo Clinic.
Q. Okay. So when you were at Mayo, they told you not to do it; is that correct?
A. I don't recall specifically them saying that,

but -- I don't believe we ever discussed that, but I don't remember that off the top of my head.

But, you know, we have journal articles, one from the Mayo Clinic, that specifically describes that it's not recommended for Zenker's diverticulum.

Q. Okay. So you've got an article from Mayo that says don't use it --

A. We do.

Q. -- during this surgery?

A. We do.

Q. Okay. Have you produced that in this case?

A. We have.

Q. And what is the name of that article?

A. It's by Baron and Case.

Q. All right. And they say don't use it. And it's a surgery you were performing?

A. It's a surgery that we perform for Zenker's diverticulum.

Q. Not flexible; is that correct?

A. It is for flexible.

Q. Okay. Were you performing flexible?

A. I was not, but the technique is the same. In a flexible endoscopic case, the purpose of the surgery is still the same; you are dividing the septum.

Q. Do ENT otolaryngologists, head and neck

surgeons, do they, that you know of, ever perform a flexible surgery?

A. I don't know specifically. I know those same two GI surgeons have written a paper with a faculty from the ENT department on Zenker's diverticulum. So they certainly collaborate.

Am I in there with every single procedure in the Mayo Clinic in the GI department? No. So I don't know that.

But there is certainly collaboration between our ENT department at Mayo Clinic and the GI department enough that they have written a paper together on the topic.

Q. And has your department where you were trained ever published anything saying don't use prophylactic antibiotics for this surgery?

A. I don't recall any specific papers from that department addressing antibiotic usage.

But, again, the faculty in our department has collaborated with those two GI surgeons on a paper regarding Zenker's diverticulum.

Q. Can you -- are you going to bring as a witness any academic person from any department that does not teach their residents to use prophylactic antibiotics for this surgery?

A. I can't answer that.
Q. Could you find anything in a witness in Tennessee or a contiguous study that says, I'm in an academic department and I train residents that they don't need to use it or don't use it?
A. I was not involved with any of the collection of the expert witnesses. I can -- I can say from paper, other papers that have been published in the literature, there are papers out there that say there is no need for prophylactic antibiotics.

Some of those are review studies. A review study is where they collect multiple studies and then come up with general recommendations based on multiple studies. Sometimes call those meta-analysis. And so there is meta-analysis studies looking at Zenker's diverticulum, and in some of those studies, they do not recommend prophylactic antibiotics for this surgery.

Q. Do those articles deal with HARMONIC® scalpel division?
A. Yes.
Q. And you can find those and deliver them and they will be from the ENT departments; is that correct?
A. That is correct.
Q. Okay. Do you think this surgery, your surgery, caused this perforation?

A. Well, it was caused during the surgery. So something happened during the surgery that likely caused it. Can I say what? I cannot.

Q. Do you remember being asked that question in your deposition, And do you think your surgery caused that, the perforation we were talking about? Answer, I don't know what caused it. It would be speculation. Did you give that testimony?

A. That sounds like a reasonable answer. I think I'm giving the same answer right now. I don't know what actually caused it.

Q. Well, let me ask you about the next question and answer and then tell me if that's reasonable. Do you think it caused it? Answer, no.

Do you remember testifying that you did not think your surgery caused this perforation?

A. I do not recall that.

Q. All right. I'm going to show you page 18 of your deposition. We were talking about the surgery and what caused it, and you said it was iatrogenic, meaning no known cause. And do you think your surgery caused that? Answer, I don't know what caused it. It would be speculation. Do you think you caused it? Answer, no.

Did you give that testimony?

A. Yeah. Continue on. You know, What do you

think caused it? I think a combination of factors. One, nutritional status, poor wound healing, thermal damage, which are all things that we discussed today.

Q. All right. So you think it was a combination of factors. One, her poor nutritional status. So poor -- so that would cause, you're saying, poor wound healing, more likely than not, or it could be thermal damage from the device. What device? From the HARMONIC® scalpel.

Is that your testimony?

A. That's the testimony.

Q. Do you still believe that?

A. I believe we don't know the exact cause of what caused it. It could be any of those factors which I was trying to describe there. So all you know is there is a hole afterwards. Whether it was a thermal damage from the HARMONIC® scalpel, whether it was from poor wound healing, there is no way of knowing the exact cause of why the perforation occurred.

Q. Okay. Let's go back to your report.

MR. JONES: Take that large one off.

All right. Let's go to the next page.

BY MR. JONES:

Q. Marilyn Foster is a pleasant 69-year-old female.

First of all, let me ask about that. Was she a pleasant patient?

A. She was.

Q. Was she cooperative in every way with you?

A. She was.

Q. Was her daughter who you dealt with, was she nice?

A. As far as I remember.

Q. Did these people seem reasonable and compliant in trying to get well, the mother?

A. At the time, yes.

Q. Okay. Well, that was the only time you had her as a patient; is that correct?

A. Well, you're asking a question retrospectively after we have time to review all of these medical records, and so retrospectively looking at it, you know, we talked about her originally seeing an ENT in 2015, where the surgery was recommended, and then she saw Dr. Catherine Vinson again in 2017, and had the surgery scheduled and rescheduled multiple times, had seen Dr. Rayne in Cookeville, and then came to me.

And so in terms of, you know, being -- I'm trying to remember the phrasing you used for -- you know, that you used, but, you know, obviously they had not aggressively tried to get it done right away. I

mean, it took them -- you know, from the time of the diagnosis in 2014, until they came to me, that was four years from the time of diagnosis until the time of treatment.

Q. And does that make them unreasonable in your opinion?

A. No, no. It just means that, you know, they -- it took a long time to get to the point of actually having surgery, even though she indicated she wanted the surgery four years before that.

Q. Well, you knew when you saw her as a patient that she had been to Vanderbilt and that this surgery had been previously recommended; not this surgery, but a form of Zenker's diverticulum surgery?

A. Well, it was a similar surgery, just different tools.

Q. And their tools were going to be the microscope and not what you used?

A. Well, it would be the laser.

Q. The laser microscope, isn't that what it's called? CO_2 laser?

A. They used a microscope. It has actually a micromanipulator device that you attach to it.

Q. I'm just asking you if she was a pleasant --

A. She was.

Q. -- and a reasonable person?
A. She was.
Q. Who, when she communicated to you, communicated what symptoms, it would be based on what you actually saw?
A. She was. I mean, I see from my notes from 2015, until my history, that she communicated those findings very similarly.
MR. JONES: Okay. And then let's go on down here. If you can take this off. We'll just go down. I can read it and then pull it up where we need it.
All right. Let's go down to surgical details.
BY MR. JONES:
Q. The patient was brought to the operating room -- this is the second surgery -- and transferred to the operating table in the supine position. What is that?
A. On a person's back is what supine means.
Q. General endotracheal anesthesia was initiated with the GlideScope and the patient was intubated.
All right. So in the trachea, which is right next to the esophagus, there was anesthesia going down to the lungs; is that right?
A. That is correct.
Q. Okay. There was no significant vocal cord

edema, which that means swelling; is that right?

A. That is correct.

Q. There was significant postcricoid edema. Where is the postcricoid space?

A. The cricoid is the area just in front of the opening to the esophagus. It would be behind the vocal cords.

Q. And is it part of the retrophar- -- is it part of the pharyngeal tissue?

A. It is. Well, it would be in front of the pharyngeal tissue. The pharyngeal tissue is at the back of your throat. There is a little separation between your voice box or larynx. So it would be the backside of the larynx. Without pictures, it's a little hard to describe.

But the back of your throat is here (indicating). The front of your larynx and vocal cords are here (indicating), and then the beginning of the esophagus, and that muscle is here (indicating) --

Q. How far --

A. -- right in front of it.

Q. How far was that away from the Zenker's perforation that you found?

A. Could you repeat that? I just couldn't hear it.

Q. In centimeters, about how far in distance would this swelling be from where the hole is?
A. Maybe three centimeters.
Q. Why was that tissue swollen at the time of the second surgery?
A. I can't answer that. All I can say is: I'd have to look and see what findings we see.
Q. When you saw them, did you think this is a sign of a probable infection?
A. Well, it's inflammation. It's not necessarily a sign of infection. Inflammation doesn't always equal infection.
Q. Okay. Inflammation is something that will follow something not -- or something bad, and it was a regular follower of infection; is that correct?
A. It's not a regular follower. I see swelling of the vocal cords all the time and they're not infected.
Q. But when you see one that's infected, it's usually swollen; is that correct?
A. That's usually true.
Q. Okay. Once the patient was anesthetized, we performed a rigid surgical -- a rigid cervical endo- -- say that word for me.
A. Esophagoscopy.
Q. Trying to identify the esophageal lumen. Why

did you want to identify the esophageal lumen?

A. Well, I mean, that's part of identifying your landmarks for surgery.

Q. Because you wanted -- once you found that, you wanted to work down towards where the hole was; is that what you were --

A. Sure, you want to see the anatomy.

Q. Due to the significant postsurgical swelling in the postcricoid space, this could not be completed.

Now, in layman's terms, does this mean that the tissue where you were trying to put these instruments down to look down her throat, that was so swollen, so inflamed that you couldn't -- you couldn't fit the instrument in it; you couldn't get it to pass?

A. It's very likely. Dr. Bunge did that portion of the procedure. So I can't comment on exactly what was seen.

Q. Were you standing right beside him?

A. I was, but you can't -- with a rigid endoscope, you have about this much view (indicating), and so, no, two ENTs can't look through a rigid endoscope at the same time.

Q. But what you understood as somebody taking part in that surgery that you wanted, both of you, to get that scope down and it wouldn't pass because the tissue

was so swollen; that was your understanding?

A. Correct. It was swollen back there, correct.

Q. We then positioned the patient for an external approach. Does this mean you put her on her side? How did you position her so you could cut through the neck in an external approach?

A. Turning the bed, turning the head. You know, we're approaching on the left side, so you're turning the head to the right.

Q. And you were doing this in preparation for cutting a hole in the side of her neck; is that right?

A. So we make an incision in the side of the neck.

Q. To cut into the side of the neck to get inside the neck --

A. Correct.

Q. -- through this incision?

I marked a three-centimeter horizontal line -- or he says, I marked a three-centimeter horizontal line in a skin crease in the neck two finger breadths above the palpated cricoid cartilage.

Can you show us on your neck where that would have been?

A. Well, your Adam's Apple is your thyroid cartilage. The cricoid cartilage, if you feel down, you can kind of feel that first ring in your windpipe just

below it. That's your cricoid cartilage. So two finger breadths would be putting it on there and going a little bit above that.

Q. Okay. And so, again, on your neck, show us where you made this hole, you made this incision.

A. The incision? Approximately here (indicating).

Q. What did you do next?

A. Well, we injected it with the -- it's called lidocaine with epinephrine. It's a numbing medication. Also shrinks the blood vessels so you have less bleeding.

You wait for that to take effect. It takes five to ten minutes to allow that to take effect.

Do you want me to keep reading the operative report?

Q. This took time to get effect. Then you say an incision was made through the skin and subcutaneous tissue down to the -- what's that term?

A. It's called a platysma. It's that muscle in your neck. If you clench it, it runs from your jaw bone down to your clavicle. If you tension it, you can it tighten up. Some people have a thin muscle; some have a thicker muscle.

MR. JONES: Your Honor, may I pass an anatomical drawing to the witness?

THE COURT: Is this an exhibit? What is this?

MR. JONES: It's an exhibit, but I want him to mark on this himself so we can make this a finalized marked copy.

MR. GIDEON: If this is one of the Netter plates, there are no objections.

MR. JONES: May I approach the clerk?

THE COURT: Yes, so --

MR. GIDEON: Do you want --

THE COURT: I'm sorry?

MR. GIDEON: Do you want a set to look at, too?

THE COURT: Yes, actually, I would. Are you going to put that on the overhead or --

MR. JONES: Yes, I was, but if --

THE COURT: If you've got an extra copy, that would be great.

MR. GIDEON: I thought you might want to look at it.

THE COURT: Thank you.

MR. JONES: Forgive me, sir. Can the overhead pick up what he's marking as he marks it? I had no idea. I'm sorry.

MR. CALLAHAN: No, it can't.

MR. JONES: He's got to mark it first.

MR. GIDEON: This is a subset, Your Honor, from

the Netter anatomic book. You should have them in sequence.

THE COURT: Thank you.

MR. GIDEON: Sure. Can I just inquire what the protocol is? Is he going to mark it and then put it up?

THE COURT: That's my understanding.

MR. GIDEON: Are we looking at fascial expression lateral view?

MR. JONES: What I'm going to have him do is mark several things at the same time. But I'll do it however you want me to. Whatever you think is helpful.

MR. GIDEON: I just wanted to know what you're going to do.

THE COURT: That's fine. He's going to mark it in response to your questions and then he's going to place it on the overhead and show it to the jury.

MR. JONES: That's correct.

BY MR. JONES:

Q. If you would, the first mark that you put on there -- have you already put a mark on it?

A. No.

Q. Okay. The first mark you put on it, mark where the incision was on here, and then explain and put a line out and say "incision".

A. I'm sorry. The pen doesn't work real well,

but --

Q. All right. Have you marked it?

A. I have.

Q. Okay.

MR. JONES: Your Honor, I apologize for what I told the Court, but Mr. Callahan tells me I'm doing it wrong and that I should get each of the markings on a separate exhibit. So I'm going to follow his advice with the Court's permission.

THE COURT: Sure. And so are you going to enter these as a collective exhibit or each marked as an individual exhibit?

MR. JONES: Each as a separate one.

THE COURT: I assume you have no objection to that.

MR. GIDEON: No, no objection.

THE COURT: All right. So ordered. Let's move on.

MR. JONES: I'm sorry.

THE COURT: Thank you.

THE WITNESS: Could I get a different pen if I'm going to be writing? This doesn't come through very well.

THE COURTROOM DEPUTY: I'll see if I can find one for you.

BY MR. JONES:

Q. All right. Sir, in this red tissue area (indicating), is that a muscle?

A. It is. I can't see where you're pointing to, but it's the main muscle that is on that picture.

Q. And is that the platysma?

A. That's the platysma.

Q. Okay. And so you made this incision --

MR. JONES: I better make this an exhibit.

THE COURT: So ordered without objection.

THE COURTROOM DEPUTY: Your next number is 21 if this has not previously been provided.

MR. JONES: It has not.

THE COURTROOM DEPUTY: Yeah.

(Plaintiff's Exhibit 21 was marked for identification.)

MR. CALLAHAN: Can you switch from the overhead?

BY MR. JONES:

Q. The platysma was divided and small subplatysmal flaps were raised high and low, superiorly and inferiorly. What does that mean?

A. Really, just what you described. I mean, we just elevate the tissue underneath that muscle to give us more space to work.

Q. Okay. Let's go further down.

Blunt dissection was carried down to the sternohyoid strap muscle and this was dissected further.

On the next document, next --

MR. CALLAHAN: This is plate No. 22.

Your Honor, at the bottom of the right corner, there is the numbers. This is plate 22.

MR. JONES: Okay. This is plate 22. I'm going to pass that to the witness.

BY MR. JONES:

Q. All right. If you would mark where the hyoid strap muscle was and mark it where it was dissected free.

Have you done that?

A. Yes.

MR. CALLAHAN: Let's see what he did.

BY THE WITNESS:

A. I think in response to -- you can't really -- I mean, you can just show where the muscle is. You can't really -- it's a static image. You really can't show where it's dissected free. That's just pointing to where the arrow is, the sternohyoid muscle.

THE COURT: You want to move that into evidence?

MR. JONES: Sir?

THE COURT: Do you want that into evidence?

MR. JONES: I do.

THE COURT: All right.

MR. JONES: I do.

THE COURT: So ordered without objection.

MR. CALLAHAN: Hand it to her. It's an exhibit.

Let's go back to the op note.

MR. JONES: Back to the op note. Bring it on down.

BY THE WITNESS:

A. And dissected free doesn't mean that we cut it. We just moved it out of the way of the other tissue.

BY MR. JONES:

Q. That is attached to something, isn't it?

A. Correct. But we're not freeing it from its attachment. You're just moving it out of the way so you can get to the tissue deep to that.

So to give you a better understanding of what we're doing, we're moving the tissue away. We're not cutting it free.

Q. And when you finish the procedure, it just goes back in its place?

A. It just go back in its place.

Q. Using blunt dissection with peanuts, we

dissected through the constrictor muscles.

What are peanuts?

A. Peanuts are almost like a cotton -- a cotton ball. You can just use it to push tissue side to side. So you're not actually cutting anything; you're just separating it.

Most of the tissue is separated by these -- what we call fascial planes, and so there is natural dissection planes where you can separate muscle.

Q. And it's soft; isn't that correct?

A. Yes, it's relatively soft.

Q. So when you use this relatively soft device to kind of push the tissue apart, something happened. Explain that. What happened?

A. Well, the tissue separates. I mean, you're using the pressure of your hand against the cotton peanut to separate the tissue, and you have retractors to keep it retracted back, and so you go to the next layer and you keep going down. So you're dissecting, bluntly dissecting the tissues. That means you're not making cuts. You're not using any cautery device to cut the tissue. You're just separating the tissue planes and then retracting the tissue and the muscles back.

Q. And then you have this statement: The tissue was extremely friable. Is that correct?

A. Well, that's a correct statement there. I wasn't meaning the hyoid muscle was. It means when we got down to the constrictor muscles.

Q. Well, were the constrictor muscles the tissue that was extremely friable?

A. Correct. I mean, that's part of the process of why people get the diverticulum to begin with.

As we'll show on some pictures, there is a triangle called Killian's triangle, which the triangle is made up of that cricopharyngeal muscle, which is that tight, bandlike muscle. And then the muscle above it is what we call your inferior constrictor muscle. That would be the back muscle of your pharynx. And there is a triangular weakness there called Killian's triangle, that's to describe it, and that's where the diverticulum pooches out.

So, by nature, that pharyngeal tissue, those constrictor muscles where it's being pushed through is more friable.

Q. And was it so friable -- the muscles themselves, were they so friable as you tried to push through them with a soft instrument, they just -- they just opened up; you just had a new hole?

A. Well, the muscles didn't tear. Again, you're separating muscle fibers.

Q. Whether it's a tear or however you call this separation of muscle fibers, using this little instrument, the soft instrument, and using it carefully, the tissue couldn't take it and it broke apart and you had a new hole; is that correct?

A. We didn't have a new hole.

Q. Well, what was this -- what was this opening you said?

A. Well, it's an opening. When you separate tissue, you're going to have an opening.

Q. All right. An opening into what?

A. Into the pharyngeal soft tissue. So that's what that pharyngeal soft tissue is. So there is a layer. You have your constrictor muscles. And on the inside of that is the mucosa. And underneath mucosa, you have fat or mucosal tissue, and that's what's actually pooching through the muscle were these diverticulums.

And so when you separate the muscles, you're making an opening through the muscle to get to that pharyngeal tissue. I didn't say I made a hole into -- you know, it doesn't say I made a hole into the pharynx, which would be a different description.

Q. Well, from the outside of the body going through the way you all had come in, was there now an

opening into the esophagus or into the pharynx or into the --

A. Well, there was not an opening into the pharynx or the esophagus. There was an opening through the constrictor muscles to the pharyngeal soft tissue.

So going from outside to inside, you're going to have constrictor muscles. Then you're going to get to the pharyngeal soft tissues.

Q. All right.

A. Then you're going to get into the back of the pharynx which is space.

MR. JONES: All right. I'd like to pass another exhibit.

MR. CALLAHAN: This is No. 62.

MR. JONES: And I'd like to make the last one an exhibit.

THE COURTROOM DEPUTY: So that would be No. 23.

THE COURT: Which one is this?

MR. CALLAHAN: This is plate No. 62, Your Honor.

THE COURT: Thank you.

MR. GIDEON: 62?

MR. CALLAHAN: Yes.

(Plaintiff's Exhibit 23 was marked for identification.)

BY MR. JONES:

Q. What I'd like for you to mark is where that opening in the pharyngeal soft tissue was created.

Have you marked that?

MR. JONES: Can the jury see that now?

MR. CALLAHAN: You have to make it an exhibit.

MR. JONES: I thought I did. We'd like to make that an exhibit, Your Honor.

THE COURT: So ordered without objection.

(Plaintiff's Exhibit 23 was received into evidence.)

BY MR. JONES:

Q. Where you have made this arrow, that's where you created this hole; is that correct?

A. An opening in the pharyngeal -- yeah, in the muscle. And that's where we found the Zenker's diverticulum. And that's the immediate next statement in the procedure note.

Q. Okay. The Zenker's diverticulum would be coming toward where the camera would be if it was taking a picture, this picture; is that right?

A. It would be coming posterior and out into -- out of the screen because they typically go off to the left side just because your spine is behind it.

Your esophagus generally sits just a little bit

to the left of your trachea, and so most Zenker's diverticulums will go off to the left side just by nature of the anatomy.

So if you're looking at this picture, coming a little bit out of the screen and into the white area.

Q. All right. In this note, as we're going to go down, it says that you used constrictor muscles, plural, to overcome -- to overlay and support the closing of the opening that you made; is that correct?

A. Correct.

Q. And where did you get those from?

A. Well, it would be almost -- this picture doesn't really -- you can't see it here, but when you get that outpouching, there is going to be a space where that arrow is. And so we suture the interior aspect of those -- of that constrictor muscle, and like I said, it makes more of, like, a triangle. So once you've taken out that pocket, yeah, there is a space created there.

And so this picture shows it more like going across like this (indicating), but there is more of a triangular area that you can partly close, and that's the constrictor muscle that was then closed.

MR. JONES: May I pass another one?

MR. CALLAHAN: This will be plate No. 222, and I believe the last one in these series, so the Court

knows. 222.

BY MR. JONES:

Q. Sir, I need to ask you one technical question. Are these Netter plates anatomically correct and reliable? I know it's not seeing it in flesh, but are these anatomical plates that you've been talking about, are they anatomically correct?

A. They are.

Q. Go ahead. Okay. Now, on this one, can you show us and mark where the constrictor muscles were that you used to support the closing that you described as making in the second surgery?

MR. JONES: May we admit this, Your Honor?

THE COURT: Yes, without objection.

MR. CALLAHAN: Make sure she gets this one back.

THE COURTROOM DEPUTY: I'll get them at the break.

BY MR. JONES:

Q. All right. Sir, on the previous one where you've done this circle (indicating), how did you get those constrictor muscles to the place that you needed to get it to to reinforce the covering for the hole?

A. I'm not understanding the question you're asking.

Q. Okay. How did you get these constrictor muscles that are located in that -- inside of that circle you made to the place you needed them to be to cover the hole that -- the covering that you put over the hole?

A. Well, we used sutures to close those muscles. Is that what you're trying to ask?

Q. No, no, the sutures would be how you did it. Did you have to mobilize them? Did you mobilize these constrictors?

A. Well, that's what you're doing when you're suturing something closed is you're bringing the tissue together. So, again, this is not an accurate representation; this is normal anatomy and not anatomy of a Zenker's diverticulum. So where it shows almost, really, no space there, you know, the pouch is pooching through.

By nature -- and there is three main reasons why -- theories of why people have -- why people get this Zenker's diverticulum, and to understand Mr. Jones' question, you have to understand kind of how these develop.

There is one theory that that muscle is too tight, meaning scar tissue. There is another theory that it has too much tonic contraction. There is

another theory that the mucosa in front of it is weak. There is a theory that the coordination of all that is not timed well, and so when you try to push the food down and it's not timed well and the muscle doesn't relax and open allowing the food to go down, that creates kind of what we call propulsion diverticulum.

And so by nature, that whole pharyngeal tissue is weak. And so, again, when it pooches out, you almost have this triangular area, and it's more lax than a person's normal anatomy, and so it's easier to mobilize it and close it.

Q. Okay. Okay. What I was trying to find out is what you did with this tissue. Did you put stitches in it?

A. Yeah, I said we put stitches in it to bring that tissue together.

Q. Okay. So you stitched these muscle fibers in various places, and you stitched them together and you put -- so now they're working in kind of a net, a stitched net; is that correct?

A. If that's how you want to describe it. I mean, they're stitched together.

Q. And before you got there and were stitching and maneuvering these -- these muscles, what was the job of these muscles?

A. Well, the normal job of those muscles is to constrict. That's why they're called constrictors. And they help push the food down.

Q. Okay. So they were muscles that were necessary and useful for the swallowing mechanism; is that correct?

A. Correct. And that's what I was trying to mention before. Part of the reason why people get some of these difficulties swallowing, it's thought that those pharyngeal muscles can be weak or become weak over time as a result of the chronically trying to squeeze food down through a cricopharyngeal muscle -- that's that CP muscle -- that's too tight or it's not relaxing in coordination with that constrictor muscle squeezing.

Q. Okay. But your decision to do this closure and reinforce it with these muscles changed somewhat the natural orientation and operation of these muscles; is that correct?

A. Well, they're already abnormal to begin with.

Q. Well, however they were abnormal to begin with, they were in a different state of abnormality after you did the second procedure; is that right?

A. Well, you'd almost say they're more in their natural position because we were bringing it back to look more like the picture here, as opposed to where you

have that big outpouching where that sac is getting pooched through. And that makes an opening. That's how the food gets in there. And so by bringing those muscles back together and reinforcing it, you're actually creating it more back to a person's normal anatomy once you've taken that sac out, closed the mucosa, and then reinforced it with the muscle afterwards.

It was also providing another barrier for reinforcement against her swallowing because even after we're done with the procedure, you know, you swallow about 600 times a day, and so every time you swallow, that force is going against the mucosal lining that we closed. So in reinforcing it with the constrictor muscle actually gives you more back-to-normal anatomy where you can resist that force of another outpouching.

Q. Well, ultimately this whole thing you did with the constrictor muscles and with the diverticulum pouching underneath it, that all broke down, didn't it?

A. It did.

THE COURT: Okay. Mr. Jones, how much more direct do you have?

MR. JONES: About 30 more minutes to 45.

THE COURT: Okay. Well, let's take our afternoon restroom break for everyone. It's 3:15 right

now. So let's take about 15 minutes. We'll come back at 3:30. All right?

THE COURTROOM DEPUTY: All rise.

This honorable court is now in recess.

(A brief recess was taken.)

THE COURTROOM DEPUTY: All rise.

This honorable court is now in session. Please come to order and be seated.

THE COURT: Okay. Are we ready for the jury, Mr. Jones?

MR. JONES: Yes, sir.

THE COURT: All right. Very good. Ms. Laster.

(Whereupon the following report of proceedings was had within the presence and hearing of the jury:)

THE COURT: Have a seat when you're ready.

Okay. Let's see if we've got everybody.

All right. Mr. Jones, when you're ready.

MR. JONES: Yes, sir.

BY MR. JONES:

Q. Sir, as I understand your testimony, there was only one opening in the esophagus or the sac, and that was the one that opened following your first surgery; is that correct?

A. Correct.

Q. Let me read you Dr. Bunge's deposition and ask you about that.

And her tissue was just so weak that in doing so -- he's talking about using the sector.

MR. GIDEON: I have an objection.

THE COURT: Yes, sir, what's your objection?

MR. GIDEON: Improper use of another deposition to interrogate a witness. This is something we talked about at the pretrial conference.

MR. JONES: Your Honor, these are partners, and I think I can ask him about what his partner and person who was there with him says about the testimony.

THE COURT: Why?

MR. JONES: To show the difference in the testimony between the two partners.

THE COURT: How is that admissible?

MR. JONES: Sir?

Okay. Can I ask him -- let me change my question and make it whether he's aware of it.

THE COURT: You can ask him that.

MR. JONES: Okay.

THE COURT: What's your -- do you have something?

MR. GIDEON: No, I just wanted to make sure my last objection was sustained.

THE COURT: It's sustained, yes. It's sustained.

MR. GIDEON: Thank you.

BY MR. JONES:

Q. Are you aware of what Dr. Bunge has testified about that second surgery and whether a second hole was made?

A. I do not recall.

Q. Okay. Doctor, did the infection that you found in the mediastinum in the second surgery, did that change the tissue in the pharynx?

A. I don't believe it did.

Q. Have you ever thought differently?

A. No.

Q. Well, what do you think the infection that you found and the sepsis that you found did to your patient?

A. Well, remember, the infection was down in the mediastinum. If we -- if we continue reading the operative note, it mentions we separated the pharyngeal and esophageal soft tissue from the spine, and then we encountered copious amount of purulent drainage in the mediastinum.

So I didn't mention any copious amount of purulent drainage prior to that. So it was in the mediastinum where all that purulent drainage was.

Q. And so the infection was not down into the -- into the -- was not in the retropharynx; is that correct?

A. Well, there is what's called a retropharyngeal space. Like I was trying to explain before, the retropharynx starts behind the pharynx, and it's normally not even a space. They're called potential spaces. They're called danger spaces because they can track from that area all the way down in the mediastinum.

So, you know, a side effect of tonsillitis is it can rupture through that pharyngeal tissue, get into that danger space, and you can get a mediastinal abscess in that space. And so that saliva most likely separated that space, tracked down into the mediastinum, and that fluid collection was sitting down in the mediastinum and that created the infection.

And so there is a continuum there. So the retropharyngeal space continues all the way down into the mediastinum.

Q. And does -- does it continue up from the place you started your surgery when you went in from the outside?

A. Repeat that question again.

Q. Sure. When you went in, when you cut in the

left side of her neck, did you encounter -- once you got the big muscle coverings out of the way, did you immediately encounter friable tissue?

A. Well, again, like I said before, the diverticulum, the whole pharyngeal area is relatively friable by nature. That area was not infected. So we didn't encounter pus initially. It was when we started moving the esophagus off the spine that we opened up that potential space and we started seeing the pus.

Q. And how long after you started this dissection did the tissue just basically fall apart and you had this new hole made? When did the peanuts make the new hole? How long had you been doing that surgery?

A. Well, there wasn't necessarily -- there was an opening in the pharyngeal tissue. It wasn't necessarily a hole. We covered that before. I don't have a time.

Q. I'm not asking so much in minutes, but where was it? Was it -- was it soon after you got your initial incision made?

A. I mean, we went over the steps there 15, 20 minutes into the surgery. I mean, it's all laid out sequentially there pretty well.

Q. Well, where you found the infection, how did that change her tissue?

A. How did it change the tissue, the infection?

Q. How did the infection you found change her tissue?

A. Well, infections in general can lead to sepsis. That's a generalized infection all over the body. So that can change all your tissues in your body. We knew that because we had gotten a procalcitonin, which is a lab that Mr. Gideon mentioned in his opening. A procalcitonin level gives us an idea that sepsis is more likely. The higher the level, the more severe the potential risk of infection.

And so, in general, any time you have potential sepsis, you're going to get inflammation all over your body. But particularly at the site where the saliva was leaking, where we saw the hole, I don't know that that was any more friable than any Zenker's diverticulum would be. It was saliva, again, going through that hole in the mediastinum and that's where the pus was. We didn't encounter pus at the site of the diverticulum.

Q. What's your understanding of Mrs. Foster's clinical course following the second surgery?

A. While she was at Methodist Hospital still or after she left Methodist Hospital?

Q. Both. Let's start with Methodist Hospital.

A. Well, immediately after surgery, we put two drains in place; one was down in the mediastinum. That

thoracic surgery was following. That's what we call a suction drain. And you have a little bowl that holds suction, and the suction of that bowl pulls fluid out of the chest. So if any additional fluid would form in the mediastinum, it would get pulled out.

We also placed what's called a Penrose drain, which is really just a -- really, a piece of rubber with a hole in it. That's called a passive drain. And that was placed a little bit higher in the mediastinum and it came out the neck.

The purpose for leaving that in, if there is any additional drainage coming out there, if it would have broke down, you would have a potential site where that would come out of the neck as opposed to collecting in the chest again.

So thoracic surgery followed her for several days until that drain was out of the chest, and they pulled that drain. You know, within a day or two, her white blood cell count that was around 28,000 had come down. Her tachycardia, which is a fast heart rate, had come down.

She remained in the ICU intubated, I believe it was until the afternoon of the next day, and that was just per what we call a hospital intensivist protocol. So we had consulted a hospital intensivist. They're

physicians that really just take care of people in the ICU, critical patients. And he was following her, and they're the ones that dictate when that breathing tube was taken out. And I believe that was taken out the morning, afternoon, evening, but the following day, which would have been Sunday.

And then she continued to progress well. You know, pain level increased (sic). You know, we told her, you know, initially, prior to going to the second surgery, what to look forward to was a four-day plan. Meaning, until we knew that the white blood cell count had gone up and there was mediastinitis, that we were typically going to wait and see if the air in the neck had gone down.

But obviously that plan changed after the second surgery. So we knew we had to leave time for that suture line where we had taken out the sac and sutured it together and reinforced that muscle, you need time for that to heal.

So we had already placed a feeding tube in her nose and down the throat prior to the second surgery, and that was left in place at the second surgery. So we knew we had a way of feeding her. And we just needed to give that area time to heal.

And that can be variable with -- you know,

because that open approach has been done for many years, there is variable time frames when a surgeon will allow that patient to start eating again. Oftentimes it will be based upon a swallow study that we get some period after the surgery, and that was the plan. We were going to wait until the following Monday to do a swallow study to see if there was any leak.

And overall she continued to progress fairly well. Pain level was very minimal. And then we waited until the following Monday to do a swallow study.

On that swallow study, that's when we first learned that after the second surgery that there was still a leak into the neck.

It was after that second swallow study that I had a conversation with Mrs. Foster, and we talked about the different options at that point. We talked about doing nothing and seeing if it would heal on its own. We talked about going in and doing a surgery to try and reinforce wherever it was leaking again. She wanted something done more immediately; meaning she did not want to wait to let it passively heal by second intention. And that's when, you know, I talked to her and she felt comfortable going to Vanderbilt.

And so that's when I called an ENT surgeon at Vanderbilt, Dr. Langerman, and we talked and had some

text messages between each other.

He had wanted to get another CAT scan just to make sure after we had done that first swallow study that none of the fluid collected in the chest, and so we repeated a CAT scan, and at that point, he accepted transfer.

However, at the time there was a mass shooting in Kentucky, and so Vanderbilt Hospital was kind of on an overflow status. So at that point, we were just waiting until a bed opened up at Vanderbilt to transfer her to Vanderbilt so they could do a surgical repair.

It was during that time we were waiting that Alisha Collins, Mrs. Foster's daughter, came to me with another ENT physician that she knew of in Richmond, Virginia where she was at and requested that I call her and to see if I could transfer her to Richmond, Virginia. Which I did. I spoke to that physician.

I had looked up her information prior to calling her. She did not seem like an ENT that would probably be appropriate, what we call a lateral level of care or upper level of care; meaning she did not look like she was doing a lot of head and neck surgery. And when I spoke with her, she kind of confirmed that.

It was at that point that I had a fellow Mayo colleague that I trained with that is at VCU, Virginia

Commonwealth, and I reached out to her to see if there was any faculty at Virginia Commonwealth that would feel comfortable with this situation.

It was at that point I was put in touch with Dr. Evan Reiter at VCU, and I discussed the case with him. They were also on an overflow situation for a few days, but he was willing to accept the patient. He wanted to repeat another swallow study because it had been about a week since her previous swallow study. And we repeated a second swallow study which still showed a persistent leak, and it was several days after that that finally a bed opened up at Virginia Commonwealth, and she was transferred to Virginia Commonwealth.

After that, I had a few messages exchanged with Dr. Evan Reiter, but I didn't have any long-term communication about her care after that.

We did have a conversation that he did tell me after they had -- she had gotten to Virginia Commonwealth, they had done a repeat CT scan and had suggested that the Penrose drain, which was that passive drain that we had placed in there, had migrated into the esophageal lumen, and his plan was to take that Penrose drain out and to see if it would close up on its own. And I think that was the last communication I had with Dr. Reiter.

Q. In order for the healing to take place, you had to get it out; somebody had to get that out, the Penrose drain, out of the esophagus, didn't they?

A. Correct. That CT scan they had done at Virginia Commonwealth was the first CT scan that had demonstrated that the drain may be in the esophagus.

She had had prior CT scans at Methodist Hospital in Oak Ridge which did not demonstrate that. And so it was at that point that Dr. Reiter felt that that was potentially causing the hole not to close and that he took the drain out, and then they followed her to see if the hole had closed.

Q. Doctor, did you ever intend to do a complete myotomy of the CP muscle?

A. During this, before the second surgery, but the initial surgery --

Q. I'm sorry?

A. -- we did not intend to do a complete myotomy.

The whole philosophy between the endoscopic procedure for a Zenker's diverticulum is that you're not doing a complete myotomy and based upon the characteristics of the diverticulum.

So in Mrs. Foster's case, she had a two-centimeter diverticulum. So the length of the cricopharyngeal muscle is approximately four to five

centimeters. So on a small pouch like hers, the intention to begin with is not to divide the entire muscle; it's only to divide that -- what we call septum where the pocket is going in.

And so the initial surgery, we did not intend to do a complete myotomy.

Q. Okay. So in the first surgery, you did not expect to do a complete myotomy when you started that surgery; is that correct?

A. That is correct.

Q. And you did not do one?

A. And I did not do a complete myotomy.

Q. And you never intended to completely divide the CP muscle as part of that first surgery; is that correct?

A. That is correct.

MR. JONES: That's all I have, sir.

THE COURT: Thank you.

Any cross-examination?

MR. GIDEON: Yes.

CROSS-EXAMINATION

BY MR. GIDEON:

Q. Okay. We have two images like this. I struggle, struggle to make a picture in my own mind of the retropharyngeal space, the mediastinal space. I may

be the only one in the courtroom that's having trouble with this three-dimensional picture, but I want the jury and His Honor to have a three-dimensional picture of what you're talking about.

You were talking about this friable tissue from the diverticulum leaking into a, quote, "potential space."

This system allows you to mark on this with your finger, and if you don't get it right the first time, you can erase and start again.

Will you do that for us?

Where is the retropharyngeal space that's this potential space that runs into the mediastinum?

A. (Indicating).

Q. Okay. Great.

Now, what looks like PVC pipe, that's the trachea; right?

A. Correct.

Q. And right along the line you drew is the esophagus?

A. Correct.

Q. Okay. I made a representation to the jurors in opening that the esophagus is collapsed. It's like a firehose that doesn't have any water in it as compared to the trachea that's bony; is that accurate?

A. Fairly accurate, yes.
Q. Okay. Now, next, where is the mediastinal or mediastinum space?
A. It's a little hard to show on here because you would have to draw in, I guess, your collarbone and your sternum, and the anatomy is obviously different in everybody. Somebody with a short neck, this may not be a good representation, but you would say it's down, you know, in this area (indicating).
MR. GIDEON: Okay. May I inquire, Judge, if the jurors can see this?
THE COURT: They are not.
MR. GIDEON: They are not able to see this.
Does the Court have a solution or a recommendation?
THE COURT: You can move it into evidence.
MR. GIDEON: I move a duplicate of this into evidence then.
THE COURT: All right. Any objection?
MR. JONES: No, Your Honor.
THE COURT: All right. So ordered.
THE COURTROOM DEPUTY: What number?
BY THE WITNESS:
A. I can try to point out -- I mean, I know I have a --

MR. GIDEON: Hold on just one second.

THE COURT: What number is this?

MR. GIDEON: This will be Defendants' Exhibit 1.

THE COURT: Defendants' Exhibit 1. So ordered.

(Defendants' Exhibit 1 was marked and received into evidence.)

MR. GIDEON: Then we'll print out a copy of this.

THE COURTROOM DEPUTY: I can't print from the system.

MR. GIDEON: Okay. All right. Can the jurors see the animation, even though they can't see the --

MR. CARTER: This is marked as our Joint 33.

THE COURTROOM DEPUTY: Okay.

MR. GIDEON: Can we pull this up now so they can see it?

THE COURTROOM DEPUTY: They're seeing it.

MR. CARTER: It's been published. She is saying they can't print it for seeing it later.

MR. GIDEON: Okay. All right. Thank you.

BY MR. GIDEON:

Q. May I lead for a moment to establish that this line down below that purple outpouching is that space you were talking about? That's the retropharyngeal

space, and that takes us down to this other area that's the mediastinal space; correct, Doctor?

A. Correct.

Q. Now, in opening, I pointed out that that second surgery started at 2352 in the morning on the morning -- evening of the 13th and into the morning of the 14th. Was that surgery literally an emergency?

A. Yes.

Q. Okay. Was that the kind of surgery, if you have a mediastinal infection, that if it's not done promptly and appropriately, does that patient die?

A. Yes, very -- very well could be.

Q. Okay. Before then, though, you heard Mr. Jones talk in opening that one of the criticisms of you was that after you recognized that there was some air leaking through from the crepitance in the swelling up around the neck, that you should have just hold your horses; don't do anything; don't take any steps?

MR. JONES: Object, Your Honor.

THE COURT: What's your objection?

MR. JONES: First of all, he's leading, and it's misstating the --

THE COURT: Well, it's cross-examination. So even though it is his witness, I am going to allow him to lead a little bit.

However, you need to ask a question.

MR. GIDEON: Okay.

THE COURT: So let's ask questions and solicit answers.

MR. GIDEON: Okay.

BY MR. GIDEON:

Q. Was there a conservative plan initially once you realized there was air leakage?

A. Yes.

Q. Okay. What was -- what were the elements of the conservative plan initially? And then the second question will be: Why leave that behind and move to returning Ms. Foster to the OR? Those are the two questions.

A. So, to begin with, obviously when I got the call and a nurse described that the neck was swollen, you know, I came in right away.

On first examining the area, it was obvious that she had what we call a subcutaneous emphysema. It's a fancy term, but it basically means you get air into the neck. And it just looks -- makes you look bloated because it's just lifting all the tissue up. And you can feel it. It almost feels like Rice Krispies when you feel on it. And it was fairly extensive.

And so at that time you just know you had an

air leak. And so my plan at that time, I looked in the back of her throat with a camera. We call it a laryngoscopy, where you go through the nose with the camera. We look at the back of the throat. I had documented at that time that she did have some swelling in that -- what we call the postcricoid area.

I knew because of the air leak that we had to wait for the air leak to go away before we could start feeding her again.

So it was at that time that I placed what we call a Dobhoff tube, which is just another name for a feeding tube, that goes through your nose and it goes down into the esophagus. I did that under, you know, examination with a laryngoscope so I knew right where it was going. We confirmed the placement of that feeding tube so we know it's at the right spot in the stomach.

So once we established a pathway where she could feed for several days, I discussed with her what's been called a four-day plan to see if the air would go down in the neck. If the air would go down in the neck, then potentially we would be able to let her feed and get a swallow study in four days.

However, we were gaining -- gathering information at that time. She was tachycardic. Her heart rate was in the 120s. We ordered a white blood

cell count that came back. Her white blood cell count was at 28,000. Preoperatively -- it was slightly high preoperatively. It was like 11,000. But a normal white blood cell count would be at 10,700. Hers was now at 28,000. We had obtained the procalcitonin level, which was elevated. So it was saying she was progressing towards more severe sepsis.

We had ordered a CAT scan, which showed extensive air all over the neck into the chest. So that air was continuing to track down into her mediastinum. It was starting to cause what we call a little compression on the lungs, and that's where it showed the fluid pocket, which they described -- I believe it was about a four-millimeter fluid collection. And the radiologist called me. I talked to the radiologist, and it was at that point we knew that we had to do something. That was more of an emergency.

We had gotten a thoracic surgeon involved. I had already talked to the intensivist because I had her moved to the intensive care unit. When I knew that there was air in the neck, I immediately moved her to a higher level of care even before I got to the hospital. So by the time I got to the hospital, she was already in the intensive care unit.

I had spoken with the intensive care physician,

Dr. Mascioli. And then once we gathered all that information, with the fact that she was tachycardic, she had the high white blood cell count, the procalcitonin level was elevated, and now we know she -- knew she had mediastinis -- mediastinitis, we knew we had to operate to get that infection out of the chest. And that's when we consulted with Dr. Todd who was a thoracic surgeon.

At my training in Mayo Clinic, we are all about a team approach to things. So it's always about getting physicians involved, what's going to be best for that patient, and that's what we did.

I don't remember exactly. Dr. Bunge was on call. I don't remember if he had just heard about it and called me, if I had called him directly, but at some point he knew about the events and I spoke with him. So he was more than happy to come in and help.

And then we planned on taking her to the operating room, which we did.

Q. Okay. Next, the constrictor muscles. When lay people think about the term "patch," we think about cutting something out and gluing it on or suturing it in place. Did you cut out the constrictor muscles, remove them from their blood supply, and patch it over the hole?

A. No.

Q. Okay. You have described what you did with the constrictor muscles; correct?

A. Correct.

Q. All right. When you were utilizing sutures to tighten the constrictor muscles, did you, to your knowledge, in any way impair her ability to swallow prospectively?

A. No. In fact, we had left the feeding tube in. So it gives you a sense of how tight you're closing everything.

Q. That's the next thing I wanted to talk about.

Why in the world would you put a nasogastric Dobhoff tube in somebody when you know there is a hole somewhere in your throat; why do you do that?

A. Well, one, we knew she was not going to be able to feed for several days. So, one, it provides feeding access. Two -- and that's why I did it under endoscopic guidance. So I used a flexible camera while I was guiding it in there. So you're very gentle to make sure you're not potentially going into that area. That's why we had checked with an X-ray.

Initially I was very careful. We had checked with an X-ray to make sure that that feeding tube had actually gone into the stomach.

Q. Okay. Does the feeding tube also give you

something like a template to know that you're not closing the constrictors too tightly?

A. It does. We can -- you can actually see the feeding tube through the mucosa. As I said, I mean, it's so thin you could see your finger.

Q. Next thing I want to do --

MR. GIDEON: If you can find me the slide that shows the Bougie postoperatively, please, and then the photograph, the last photograph that's taken interoperatively.

BY MR. GIDEON:

Q. I am pronouncing that correctly as Bougie?

A. Bougie. If I'm pronouncing it correctly. I'm sure it's French, probably.

MR. GIDEON: All right. Give me the last of those photographs.

I want to make that a little bit larger.

BY MR. GIDEON:

Q. Number one, I want to talk about standard of care for an ear, nose and throat head and neck surgeon practicing in Oak Ridge, Tennessee or Knoxville, or a similar community in January of 2018. Is actually taking this set of photographs required by the standard of care?

A. No.

Q. Okay. Is it your practice to take photographs of the work you do?
A. I do. I usually take lots of photographs.
Q. Okay. Is this the final photograph of the original, the first Zenker's diverticulum procedure you performed on Ms. Foster?
A. Yes.
Q. Okay. And is this the photograph --
MR. GIDEON: Is the jury able to see the photograph? No. Okay.
MR. CARTER: Exhibit --
MR. GIDEON: All right. I'm going to respectfully move the admission of this photograph. I'm catching up, Judge. I move the admission of this photograph.
MR. JONES: No objection.
THE COURT: So ordered without objection.
MR. GIDEON: Okay. Now can I post it and publish it to the jury?
THE COURT: She is going to publish it to the jury.
THE COURTROOM DEPUTY: I got it.
MR. GIDEON: Thank you.
BY MR. GIDEON:
Q. All right. This is the final photograph that

we've just admitted into evidence. This is after you have done everything that Mr. Jones talked to you about using the HARMONIC® scalpel; correct?

A. The longer one, yes.

Q. The longer one. After you have done everything you intended to do with the HARMONIC® scalpel?

A. Correct.

Q. Okay. And you were talking to the jury a few minutes ago. We're all familiar with laser cutting tools. We're familiar with saws and blades. You referred to this as performing its jobs through ultrasonic function, and you talked about cutting and sealing; correct?

A. Correct.

MR. JONES: Object to the leading.

MR. GIDEON: Your Honor, under Rule 611, I respectfully submit I'm permitted to do so.

THE COURT: He is. This is cross-examination, Mr. Jones. It might be his witness, but he is cross-examining. So I'm going to allow him to lead. I understand he's not adverse, but I'm going to allow him to lead.

MR. GIDEON: Yeah.

BY MR. GIDEON:

Q. Tell us, please, about how an ultrasonic energy

device actually cuts and seals at the same time as compared to cutting with a laser, cutting with a knife, please.

A. Well, obviously cutting with a knife is just -- it's blunt dissection. It's the sharpness and there is no sealing of any tissue.

The CO_2 laser is using just that. It's a -- it's a laser energy to cut and divide the tissue. You do get some -- a little bit of coagulation with the CO_2 laser.

With the staple, it's more of a -- I guess physical stapling. You still get some trauma to the tissue as you're separating it; whereas, the ultrasonic, the Harmonic® device, you're using vibration and energy.

So the bottom prong of that is an insulating tip. The top one is the one that vibrates. And it goes between those little jaws and it vibrates the tissue, and as it's vibrating, it actually seals and cuts the tissue at the same time.

The higher energy level will divide it faster. The lower energy level will divide it more slowly. There is actually built into that device what we call adaptive tissue technology. So it actually senses the tissue and may divide it more rapidly and more slowly based upon the features of the device itself.

So you could divide tissue one time on a minimum setting and it may take three seconds to divide it and seal it. Another time it may take five seconds to divide it, just based upon the technology and the device itself.

MR. GIDEON: I'd like to pass this to the witness to authenticate this as a representative duplicate of the handset that he used on January 12, 2018, and ask that it be admitted.

THE COURT: Okay. Any objection, Mr. Jones?

MR. JONES: No objection.

THE COURT: All right. So ordered without objection. We're going to substitute a photograph of that in our record.

MR. GIDEON: After the case is concluded, Your Honor, but I want the jurors to have the three-dimensional model when they deliberate.

BY MR. GIDEON:

Q. You mentioned adaptive technology. That's the first time it's been mentioned in this case. Tell us about the adaptive technology and the Johnson & Johnson Ethicon HARMONIC® scalpel. What does it do to assist in accomplishing its goal and at the same time protecting the patient?

A. Well, just basically what I just described. It

basically -- it senses the tissue in-between the prongs and it divides it based upon the tissue characteristics of the technology that's built into the machine.

You know, just -- you know, so, I mean, technically, I mean, you're putting tissue in here. You're clamping down on it. This is the minimum and maximum settings we talked about. So you know where the buttons are.

And the device we use in thyroid surgery in head and neck, it's a little different, but it still has the same positioning of the minimum and maximum buttonings. You know, you have a rotative device. Obviously, technically, depending on where you're at, you want to position differently depending on where the closest tissue damage is.

Most people are going to have the insulated tip down and a vibrating tip up in the esophageal airways. So this one is going into the pocket itself and you're closing it.

And, like I said, the device itself dictates how fast it goes through the tissue to some degree.

Q. Okay. Back to the photograph that should still be up, this is after you've used the HARMONIC® scalpel. All the cutting, burning, energy source is finished; right?

A. Correct.
Q. This is the photograph. Does this photograph show a hole in Ms. Foster's throat that's going to lead to a perforation?
A. No.
Q. To a reasonable degree of medical certainty, did you comply with standard of care in, A, looking at this and putting the Bougie down to probe it?
A. I don't know if it's standard for the procedure, but it's what I do to ensure that there is no hole there, to feel more confident when I'm done that there is no physical hole there.
Q. Okay. Do you believe you complied with standards of care in January of 2018, in the greater Oak Ridge community, Knoxville community, by taking the photograph, first of all, looking at it, and touching the area with the Bougie to make sure there is no leak?
A. Yes, certainly taking photographs is probably beyond the standard of care because I don't know of -- at least of my partners that take a lot of photographs like I do.

But certainly to do the best possible care you can for the patient, I think it's critical to feel those areas and make sure you have no hole there before you take your instruments out and wake the patient up.

Q. All right. You and I are both wearing glasses. Were you using something that was a little more precise than wearing a set of glasses when you were doing this procedure?

A. Yeah. So the image you're looking at is from an endoscope. In the last 15, 20 years, the power of the endoscopes have become so powerful that your visualization using endoscopes is actually even so much better than the microscope, and that's why I use it. So much to the point that even ear surgery now is transitioning over to endoscopic ear surgery as opposed to using a microscope.

And so what you can't see on here is: I've gotten so close to the area that from this view, you can't even really see much of my staple line. So that's how magnified we are in on this shot here.

What you can see at the very bottom of the V is what looks like to be probably the muscle layer. And then on the left side of the image, you can see where the tissue has been sealed and coagulated.

The picture shows it better on the left than the right, but it's a similar image on the right. It's just not centered.

Q. Okay. Bottom line then is: As we look at this photograph, as we form a mental image of this

photograph, approximately what kind of magnification are we looking at?

A. Well, I can't say in terms of magnification. I don't know a technical term for that. But, you know, again, we're talking about the visual image on there. If the remaining sac was approximately five -- five millimeters, that area on the screen is about five millimeters.

Q. Okay. And that area on the screen does not show either a leak or signs to suggest a leak to come; correct?

A. Correct.

Q. All right. Now, Mr. Jones spent some time talking to you about when you first were told that Ms. Foster's neck was full when she had some crepitance and when she had some difficulty with swallowing. You'll recall that exchange?

Should the nurse in question have notified you earlier than she did?

A. I think so.

MR. JONES: Your Honor, we object.

THE COURT: What's your objection?

MR. JONES: May we approach?

THE COURT: All right.

(Whereupon a sidebar was had outside the

hearing of the jury as follows:)

MR. JONES: If it's not for laying a foundation for blame, then it's irrelevant as to whether she did. He hasn't said he knows the standard of care for this person. And there is no foundation for it and there is no relevance as to whether the nurse should have done something.

MR. GIDEON: Well, I respectfully disagree because there was all this time spent on when the nurse notified him, and I wanted to close the loop that she should have notified him earlier when she made those findings because he spent so much time on it. I just want to close the loop.

MR. JONES: I spent time on it and --

THE COURT: One talking at a time.

Were you finished?

MR. GIDEON: No. And I also wanted to ask him if he had done that, would he have operated sooner, would he have intervened sooner, because one of the critiques is going to be that he shouldn't have done the second surgery if it was more than 24 hours after the completion of the first.

But I'm not asking have you charged them at Methodist, if there is any responsibility for this.

MR. JONES: The last thing is exactly the blame

shifting that the Tennessee courts say under our Medical Malpractice Act you can't do. It covers both causation and it covers negligence. If you say that somebody else has partial cause in an event, that's blame shifting and you can't do it. And I've cited it in a brief on this to the Court.

The second thing is the issue of how long this infectious process had been going on is a huge factor in when they should do it, when they finally do it, and we say it was too late to do the aggressive closure because of so many hours that had past.

So I have to establish when the signs and symptoms were there, which is what I did.

MR. GIDEON: But if it's too late and the person who is supposed to tell you didn't tell you, then that's part of the evidentiary mix.

As I told the Court, I will not argue, and I'm not going to ask that there be a spot on the jury verdict form.

THE COURT: What is your question to him going to be exactly?

MR. GIDEON: What would you have done if they had notified you that night that she has got this crepitance in her neck and she is having a difficult time swallowing? That's what I would ask.

MR. JONES: And he's laying the foundation that she -- I'm sorry, sir.

THE COURT: Well, that's all you're going to ask?

MR. GIDEON: Yes, sir.

THE COURT: We'll allow him to ask that question. I don't want you to go beyond that.

MR. GIDEON: I told you I wouldn't.

THE COURT: All right.

(Whereupon the following was had in open court within the hearing of the jury:)

BY MR. GIDEON:

Q. If you had gotten the call from the nurse that night that Ms. Foster has got swelling into her neck and had difficulty swallowing, whether 9:00 o'clock or 10:00 o'clock, whatever time it was, what would you have done?

A. If we had gotten it at 9:00 o'clock -- well, one, just air in the neck is not an emergency to go back to the operating room right away. So you still would have conservative measures because a lot of the times those air leaks can resolve on their own. In fact, most of the time they do.

So right then it wouldn't be an emergency that needed to go back to surgery, but I would have moved her to an ICU. I would have put the feeding tube in, and I

would have waited to feed her again.

Q. Okay. Now, we've talked a little bit when Mr. Jones was asking you questions about literature. I'd like to ask you whether or not you consider the publication entitled Flexible Endoscopic Management of Zenker's Diverticulum, the Mayo Clinic Experience by joint authors David Case and Todd Baron, do you consider that reliable?

A. Yes.

MR. GIDEON: Okay. I'm going to ask that those be identified. I'm aware of the rule that precludes them from being exhibits. And I'm going to do this sequentially in just a moment, Your Honor.

THE COURT: Any objection to the offered for identification?

MR. JONES: Not to marking it for identification.

THE COURT: All right. So ordered.

BY MR. GIDEON:

Q. The next one, there is another article entitled Endoscopic Stapling of Zenker's Diverticulum: Establishing National Baselines for Auditing Clinical Outcomes in the United Kingdom.

Are you familiar with that article, too?

A. Yes, I am.

Q. Is that publication reliable?
A. Yes.
Q. Next publication entitled Zenker's Diverticulum, Exploring Treatment Options from the Otorhinological Society of Italy published in 2013. Is that publication also reliable?
A. Yes.
Q. Do those all three have one thing in common?
A. Yes, they all note that perioperative antibiotics are not required for an endoscopic diverticulum.
MR. GIDEON: May I approach and just have these marked for identification purposes, please?
THE COURT: Collectively as an exhibit?
MR. GIDEON: Yes, sir.
THE COURT: For identification, collective exhibit?
MR. GIDEON: Yes, sir.
THE COURT: Thank you.
BY MR. GIDEON:
Q. If you thought antibiotics were required by the standard of care, would it have cost you anything to write an order for two grams of Ancef IV for Ms. Foster before the surgery?
A. No.

Q. If you had thought that she needed Clindamycin or some other antibiotic preoperative, would it have cost you anything, taken any significant time?
A. No.
Q. In your opinion, was it entirely appropriate meeting the standard of care not to order intravenous antibiotics for this lady who had been on amoxicillin, thousand milligrams a day for several days?
A. It was not indicated.
Q. Just not indicated?
Did you comply with the standard of care or did you blow it in your management of this lady?
A. No, I complied with the standard of care.
Q. Okay. Did you treat her any differently in terms of performing the Zenker's diverticulum than you were trained at the Mayo Clinic?
A. No.
Q. Now, Mr. Jones asked you how many cases you had done, residency and postgraduate, and asked you if you had done anything since then.
Other than Ms. Foster's case, had you ever had another perforation?
A. No.
Q. I want to get to the term "friable". If we have a Zenker's diverticulum that's formed over a number

of years and that tissue pouches out, thins out as it's stretched and stretched and stretched, does the character of that tissue change from the way it was 70 years ago, as Mr. Jones said?

A. Yes, slowly over time, it will.

Q. Okay. What do you mean when you use the term "friable"? Are you only referring to infected, grossly infected tissue?

A. No, what I mean by friable, it's easily torn.

Q. Okay. Is the pouch still friable even if not infected?

A. Yes.

Q. Is that what you were trying to communicate with your commentary with Mr. Jones?

A. Yes.

Q. The Penrose drain, let's assume for a moment that what was reported to you from the folks at VCU, that the Penrose drain migrated into the esophagus, is that an example of a misplaced Penrose drain?

A. No.

Q. Okay. Can a Penrose drain migrate into the esophagus even though everybody has done everything correctly?

A. Yes.

Q. Where was the Penrose drain placed in the first

place? They have seen the line behind the esophagus. Where did you put the Penrose drain to drain fluid out of the mediastinal space?

A. The Penrose drain was placed in that retropharyngeal space starting in the upper mediastinum. The suction drain was placed a little bit deeper and it came out through the neck and was sutured in place. So it was sitting right behind the esophagus, right behind the anastomosis, which is that suture line where we brought those muscles together. It was sitting right behind that.

Q. Okay. For the --

MR. GIDEON: I will ask the Court with indulgence to lead for just a moment so we can set the time frames.

BY MR. GIDEON:

Q. There was an esophagram done on January 22, 2018, another one done January 28th or 29th; correct?

A. Correct.

Q. There was a CT scan done on the evening of the 13th into the morning of the 14th; correct?

A. Correct.

Q. And another CT scan done at Methodist Hospital while Ms. Foster was still a patient there?

A. Correct. The eating after we did the

esophogram, Dr. Langerman at Vanderbilt had recommended doing it so there wasn't any contrast fluid still sitting in the chest.

Q. All right. Two CT scans, two esophograms. Did any of those -- did the reports on any of those suggest the Penrose drain had found its way into the esophagus?

A. No.

Q. None of them at Methodist Hospital ever suggested that?

A. None.

Q. And with respect to interpretation of imaging studies, at a hospital like Park West or Fort Sanders or Methodist Hospital in Oak Ridge, after those studies are done, does a radiologist, a physician with specialty with training in that field look at the imaging study and do a report?

A. Yes, they do.

Q. So it's not just you looking at the scan?

A. No.

Q. In any of those four studies, did the radiologist even suggest the Penrose drain was, in fact, in the esophagus?

A. No.

Q. Okay. The last thing I want to address is your communications with Dr. Langerman at Vanderbilt.

Will you explain again why you were contacting him.

A. Well, after we had gotten the esophogram which showed the leak in the neck, I had asked Ms. Foster -- we talked about what we were going to do and the different options we could do. We talked about how those leaks can slowly heal over time.

You know, I think it was my impression that, you know, because she was caring for her husband, you know, the whole reason we were doing the endoscopic approach to begin with and why she had sought three ENTs is because she didn't want to have a delayed recovery. She had to take care of her husband. And so she did not want to just wait on it closing by a secondary intention. She wanted to do something that would try to get her back to normal functioning faster and out of the hospital.

And so we had talked about surgical approaches to closing it again, reinforcing more tissue, and it was at that time she expressed that if she wanted to have that done, she wanted to go to Vanderbilt, and that's when I contacted Dr. Langerman.

Q. All right. Did you have a series of communications with Dr. Langerman?

A. I did.

MR. GIDEON: All right. I'd like to introduce and move their admission into evidence the communications between our client and Dr. Langerman at Vanderbilt.

BY MR. GIDEON:

Q. Is this the first one (indicating)?

THE COURT: Is there any objection, Mr. Jones?

BY THE WITNESS:

A. It's probably not the first --

THE COURT: Hold on. Hold on.

THE WITNESS: Oh, I'm sorry.

(A discussion was had off the record amongst opposing counsel.)

MR. JONES: No objection, Your Honor.

THE COURT: No objection?

MR. JONES: Yes.

MR. GIDEON: This was addressed a week ago.

MR. CARTER: Joint 23.

MR. GIDEON: I want them in order, please.

BY MR. GIDEON:

Q. And what I want to do is authenticate these so that we, the jury and the judge, sees the sequence of these communications.

Up on the one that's 12:33 p.m., can you tell us -- and basically just read it to us, the

communications back and forth between you and Dr. Langerman, please.

A. Well, this is following a conversation I had had with Dr. Langerman.

Q. Okay.

A. And, I spoke with Zenker's patient and family. I discussed -- discussed with you earlier today, and they would like to see you and plan a surgical repair as opposed to a waiting approach. CT of the neck, chest was just finished, but nurse informed me that they did it without contrast due to the patient reporting a history of a rash.

Q. Okay. His response?

A. Hi, Jonathan. Absolutely. Our transfer center number is the following, 615-875-4000. Please tell them I am going to accept the transfer and provide patient details. They will then get in touch with me to confirm. I'm scrubbing in right now. So I may be out of touch for a bit. Thank you for thinking of me. Please send them with disks of all scans, also. Thank you.

Q. And then did you respond at 6:24 p.m. the same evening?

A. Sure. I spoke with the radiologist, and despite no contrast, he didn't see a large collection of

fluid but a little tracking along the Penrose drain along the mediastinum.

Q. All right. And did the communications continue into the evening?

A. Jonathan, thank you. I actually had a note to reach out to you, so I'm happy you did. I've checked with transfer center a few times. Looks like some discharges are pending and it should be soon. Alex.

Q. All right. Next.

A. She will be excited. She is already planning her first meal when she is okay to swallow.

And then on February 2nd, Just an FYI. Patient's daughter wanted her transferred closer to home in Richmond, Virginia. So she was transferred to VCU, Virginia Commonwealth University, yesterday. I appreciate all your help. Jonathan Hafner.

Q. Okay. So beyond providing care with -- for her on the night of the 13th, into the morning of the 14th, and providing care thereafter, after Ms. Foster expressed her interest in having something definitive done, you communicated directly with Dr. Langerman; correct?

A. That's correct.

Q. Attempted to get her a bed at Vanderbilt?

A. Correct.

Q. Because of the shooting in Kentucky, they didn't have any beds?
A. Correct.
Q. You then contacted at least two folks in Virginia to get her admitted to VCU?
A. Correct.
Q. Okay. Now, I want to close by asking you just two questions, please.
Are you familiar with accepted standards of care for an ear, nose and throat physician practicing your specialty in Oak Ridge or a similar community in January of 2018?
A. Yes.
Q. Did you meet the standard of care?
A. Yes.
Q. Was there anything you did that caused an injury to Ms. Foster that was due to malpractice?
A. No.
MR. GIDEON: Thank you.
THE COURT: Thank you.
Any redirect, Mr. Jones?
MR. JONES: Yes, sir.
THE COURT: Just for planning purposes, how much do you anticipate?
MR. JONES: 20 minutes.

THE COURT: Please proceed.

REDIRECT EXAMINATION

BY MR. JONES:

Q. Doctor, after your surgeries, did Mrs. Foster have stricturing that was not present before your surgery?

A. Did she have what?

Q. Did she have strictures that were not present before your surgery?

A. She had previous strictures that were dilated two previous times that we were aware of; one 15 years ago and then one -- and I believe in Virginia -- in 2014 before she presented to Dr. Rayne.

Q. Doctor, did she have strictures that were not present before you did your surgeries?

A. She did not. Those had been dilated previously.

Q. No question about it? There wasn't any strictures? Nothing had changed about previous strictures; is that correct?

A. That is correct.

Q. Do you recall me asking you, Did she have any stricturing of the esophagus that was not present before your surgery, and what your answer was?

A. I do not.

Q. She had strictures before the surgery that had been treated. Same thing you had told me. Question, does she have more stricturing now? Answer, She had a stricture that was treated. Her current condition I can't answer at the deposition, but she had a stricture between the time of my surgery and the deposition.

Where did that stricture come from?

A. Well, the whole process of the -- so you have to look at your patient's overall history. So one of the main theories behind why you get too much constriction of that cricopharyngeal muscle is from chronic reflux. And so she had had a long history of chronic reflux. She even presented to me -- I don't think she was even on reflux medications. And so over time, you get constrictors which she had dilated two previous times.

There is always going to be some scar tissue every time you dilate that, and the strictures come back over time.

Yes, we did a surgery on her. With any surgery, you're going to have scarring. We talk about, you know, main risk of any surgery; pain, infection, bleeding, scarring. So you're always going to have some scarring and you may develop another stricture.

So I can't determine whether any future

stricture was related to what I did or to anything that had happened previously before that.

That there was a stricture sometime afterwards, that was true because there was a physician at Vanderbilt who dilated that stricture.

Q. And what caused that stricture that was dilated that did not exist before you did your surgery?

A. Again, it could be reflux. It could be my surgery. She had had prior strictures. So she was prone to getting more strictures, again, based upon her reflux disease.

I'm not saying it couldn't have been the prior surgery that we had done, but there is a lot of the factors in there that by the nature of what she had are going to lead to strictures, and she had had two prior strictures.

Q. Doctor, after reviewing her records, did you conclude that she had any permanent injury from your surgeries?

A. No.

Q. Are you telling us and telling this jury that she has absolutely no injuries as a result of your surgery?

A. No.

Q. Do you recall me asking you in your

deposition -- page 106, line 7 -- Does she have any permanent injury from the surgery in your opinion from reviewing her records? Answer, Yes, we discussed the stenosis. We discussed the stenosis.

Did you give that testimony?

A. Well, I just said that our surgery could have caused a stenosis. Reflux can cause a stenosis. But can I say 100 percent that her stricture down the line was from the surgery? I can't say that 100 percent. It could be. I'm not denying that it couldn't be.

Q. And did you say basically that that --

THE COURT: Is there an objection?

MR. GIDEON: Yes, there is Federal Rule 106, Rule of Completeness. I think the rest of --

MR. JONES: I'm getting ready to do that. That's what I'm --

MR. GIDEON: Let me just note my objection to the Court.

Rule of Completeness, Rule 106. The rest of page 106 needs to be read at the same time, not just the lines that were just read, all the way down to at least line 21.

MR. JONES: Your Honor, that's exactly what I was getting ready to do.

THE COURT: Okay. So, objection sustained.

You're going to read it in.

MR. JONES: Okay.

THE COURT: All right. Thank you.

BY MR. JONES:

Q. And I asked you how does that affect her. Then you say, Well, I guess, I should correct that's not permanent, but it affected her in that she had had it dilated. But it was not worse because it showed up even before it had been dilated. That was the tablet in the esophagus that was passing easily into her esophagus. So functionally, before she even had the stenosis dilated, she had improved function of her esophagus prior to my -- compared to before my surgery and afterwards.

Question, How long will the dilation reduce the stricture before it comes back? I can't answer that.

Do you expect it to come back? Do you expect it to come back?

A. Are you reading a statement or asking me a question?

Q. I'm asking you a question now. Are you expecting that stricture to come back?

A. Like I just said, it very well could.

Q. Was this stricture greater after you did your surgery? Was it different after you did your surgery?

A. Well, there was -- immediately before our surgery, there was not a stricture. The concept you have to get is strictures develop over time. So if you get a static image at one time and say there is no stricture, she has the process of developing strictures over time because of her chronic reflux.

So even if we had done a surgery that didn't require us to go back to the second surgery, she was still at risk of developing strictures over time because of her reflux.

Q. Sir, with her stricture, was it different after your surgery?

A. Yes.

Q. While she was hospitalized after her repair surgery, did she -- did she have leaks from two different places in her esophagus?

A. After the -- can you repeat the question?

Q. After the repair surgery, did she have leaking in two locations in her esophagus or from her esophagus?

A. The swallow studies show that it was tracking in different places.

Q. From two places?

A. It was tracking two different places.

Q. So does that mean she had two leaks?

A. Well, there is -- I can't answer that question

because I can't see. The only information you have is from the swallow study. So when they do the swallow study and it tracks to different places, it could be one hole and the contrast is tracking into different sides of the neck.

We had already done a surgery that, you know, went into that potential space, and so it's going to track differently. So the contrast tracks to the right and tracks to the left. It could be coming through the same hole; it could be coming from two different holes. There is just no way of knowing that information from the esophogram. I don't think it obviously delineated that. It just said where the contrast is tracking to.

Q. Did you ever track to see after your surgery if there were two holes in her esophagus?

A. After the second surgery?

Q. After the second surgery.

A. Well, you know, we can't go back and look unless you open up the neck again to see, and she had already decided if she wanted another procedure that that was going to be done at Vanderbilt. So we just wouldn't have that information.

Q. Doctor, where we saw on photograph A that brownish tissue, that's where you had applied the HARMONIC® scalpel; is that correct?

A. That brownish tissue at the bottom I already described before was the bottom of the cricopharyngeal muscle at the tip of the Harmonic®.

Q. And that was exactly where the hole was in your second surgery; is that correct?

A. That is not correct.

MR. JONES: Okay.

THE COURT: Are you finished, Mr. Jones?

MR. JONES: Yes, Your Honor.

THE COURT: Any recross?

MR. GIDEON: One question.

RECROSS-EXAMINATION

BY MR. GIDEON:

Q. Would perioperative IV antibiotics for 60 minutes around the time of the surgery have sterilized or prevented mediastinus -- mediastinitis and avoided the need for that second surgical procedure?

A. No.

MR. GIDEON: Thank you.

THE COURT: Thank you.

Are we finished with this witness?

MR. GIDEON: Yes.

MR. JONES: Just very brief.

THE COURT: We've had our direct. We've had our cross. We've had our redirect. We've had our

recross.

MR. JONES: We had an entirely new subject that last time.

THE COURT: Okay. I'll let you go ahead. You've got one question?

MR. JONES: No, sir. I'll wait and do it with another witness because I'll need more development than that.

THE COURT: All right. Are we finished with this witness?

MR. GIDEON: Yes, sir.

THE COURT: All right. Thank you.

All right. Thank you, Doctor.

(Witness excused.)

(Whereupon a portion of the trial proceedings was had but not requested to be transcribed.)

C-E-R-T-I-F-I-C-A-T-E

STATE OF TENNESSEE

COUNTY OF KNOX

I, Teresa S. Grandchamp, RMR, CRR, do hereby certify that I reported in machine shorthand the above excerpt report proceedings, that the said witness(es) was/were duly sworn; that the foregoing pages were transcribed under my personal supervision and constitute a true and accurate record of the proceedings.

I further certify that I am not an attorney or counsel of any of the parties, nor an employee or relative of any attorney or counsel connected with the action, nor financially interested in the action.

Transcript completed and signed on March 30, 2022.

TERESA S. GRANDCHAMP, RMR, CRR
Official Court Reporter